# Rural Cemeteries.

The poor chrysalis, in his lonely grave,
Seemed sinking hopeless in oblivion's wave.
But lo! what magic bursts the dreary tomb!
What voice angelic bids the sleeper rise!
He wakes arrayed in beauty's living bloom,
His new-born plumage tinged with rainbow dyes;
In air gay floating, while the sunbeam flings
A blaze of splendor o'er his glossy wings.
Thy emblem this * * * * * * SAMUEL J. SMITH.

THE following communication from a valued correspondent, leaves us little choice but to endeavor to comply with its requisition:—

OFFICE OF THE CEMETERY OF SPRING GROVE,
CINCINNATI, March 4, 1856.

DEAR SIR: You will confer a favor on many readers of the *Horticulturist*, by publishing in that valuable magazine an article on the "Proper Selection of Inclosures for Lots, and of Trees and Shrubs for planting in Rural Cemeteries." It gives me pleasure to state, that a taste for these laudable improvements is rapidly increasing throughout the West, and, to our Eastern brethren, we look for such instruction in the adornment of cemetery grounds as their judgment, from experience of many years' standing, may be able to afford. Very respectfully,

R. BUCHANAN, *President.*

TO JOHN JAY SMITH, Esq.,
*President Laurel Hill Cemetery, Philadelphia.*

In the first place, it will be proper to remark, that in the history of a permanent cemetery, a century is but a short period; hence, preparations for its embellishment by the managers as well as the individual owners of lots, should be made on different principles from those usually employed about a house or a garden; and this leads to the further remark, founded upon the transitory nature of man's existence, by which it happens that often in less than twenty years, there is no interested party, unless it be the Cemetery Company itself (which cannot, in all cases, be calculated on), left to care for, keep in order, and cultivate the sacred spot where we have placed our most cherished friends, and where we expect to be deposited ourselves. What folly it is, then, to inclose a lot with poor iron railing, that we know, beforehand, will rust and decay in a very few years, and even sooner if it is not regularly painted; indeed, iron may be said to *rot*, when exposed to all the atmospheric influences, just as paper decays; the process is only less rapid.

In looking about us, then, and taking into view the lapse of time, it might be supposed we should employ at least as much care for our slightly more extended prospects of earthly immortality, as the chrysalis does when it wraps its mantle around it, and protects itself with such wonderful care, to guard against a single winter's cold.

As a general rule, all this is neglected, especially by those who inclose lots, with many of whom it cannot have failed to be a cherished hope that they have

provided, in perpetuity, for their places of sepulture. Vain hope! in a century from this time, it may not be too much to say, at least a majority of all the so-called "improvements" will be dissolved into their original elements, and, "like the baseless fabric of a vision," be no more. A little reflection will convince any one of this, if we except vaults below ground, which, being built of brick, and properly constructed, are much more imperishable; we speak of the surface; the parts exposed to the atmosphere, and to public scrutiny.

Of the monuments, it will only be necessary to say, that no limestone (marble) has yet been discovered which is indestructible, or even what might be called enduring. Granite is much more so, but, wherever this is imperfectly jointed, the inexorable tooth of time, aided by moisture, fungi, and frost, must sooner or later be the conqueror in this climate. This is a slower process than that which attacks the iron, and need not, perhaps, detain us; but, wherever metal and stone are united, as they frequently are, rust must discolor, and destruction ensue.

How, then, shall we improve cemetery lots? becomes a very nice and delicate question, which we shall endeavor to answer, with all the lights which we yet possess.

There are two descriptions of rural cemeteries adopted in this country; very different in their general outline, and necessarily differing extremely in their natural and artificial styles. The first is the wooded cemetery; of this kind are Greenwood, at New York, Mount Auburn, near Boston, Green Lawn, Baltimore, and the one over which our correspondent so ably presides, at Cincinnati. They are essentially very extensive, and calculated to accommodate a large population for a long series of years; they are the type with which the rural burial-place became identified in the American mind; with which, in short, our people, the moment they saw Mount Auburn, were not only satisfied, as contradistinguished from the close city graveyard, but gratified. From this truly rural specimen have arisen the many successors we now see distributed around our cities, mostly with good taste.

Of the second, or garden cemetery, LAUREL HILL, at Philadelphia, which we have planted and tended, with a sedulous affection, for twenty years, may be taken as the example. No suitable spot, of very large dimensions, was to be found near our comparatively old city,* and, moreover, till the experiment was tried, it was firmly believed, by thoughtful people, that the habits of the citizens would be opposed to departing from the vicinity of the church; this might have been true, had the churches made proper preparations for a rapidly increasing population; but they neglected to do so, though very often their charges amounted to sums that the bereaved could illy afford to meet. Country accommodation became a necessity from the crowded condition of city receptacles; rural cemeteries were at once established in popular favor in every educated community where the want was felt, no less than where it was not.

In a large rural cemetery, trees offer the first means of improvement, and afford the greatest beauty; they are, if there were but one essential beauty to be studied, *the* essential; fortunately, where ample space exists, there are few trees that are utterly unsuitable, nature having formed but few floral adornments that even the instructed eye utterly disclaims. There is, however, a choice, and we shall proceed to point out what experience has shown are the best. In doing so, we shall first consider those that are to constitute the permanent investments, if we may so speak, and, afterwards, those trees or shrubs which are more suitable to individual lots, inclosed or otherwise.

* The Laurel Hill Company commenced with but twenty acres; this has been gradually extended till the corporation possesses about sixty acres.

A judicious selection and apportionment of evergreens is essential; their partial gloom is favorable to contemplation, and yet they afford a cheerfulness, in winter, highly agreeable. As in the material of monuments, and in inclosures, we are to provide for the future, to prepare a sylvan shade in which our successors may walk, and ruminate on the deeds and men of a former time, we should suit our plantations to the objects around us, and yet have the eye prominently fixed on what our plantations will become. The landscape gardener is nowhere so much required as in the laying out of a large cemetery. He knows, or ought to know, to what height each tree may be expected to attain; his eye should look with critical judgment, to the future more than the present, in selecting a tree for yonder knoll, or to border the river, stream, and lake. He must also remember his climate, the soil, and what particular trees flourish best in them;

> "Or such as, by experience once approv'd,
> Are found adopted by the climes they lov'd.
> All other foreign plants with caution try,
> Nor aim at infinite variety."

So says the poet, and yet we highly recommend variety, though an "infinite" variety should be avoided. It is an error, in planting a large cemetery, to employ only the trees that succeed in the immediate neighborhood; even in a well-wooded site, where, to the eye of the citizen, there is shade in abundance, and perhaps to spare, a judicious addition of hardy trees and shrubs, with a foreign air, are of great importance. Thousands of persons who visit Laurel Hill do not *define* this source of gratification, though they are sensible of something novel and pleasing. Had they been accustomed to the study of foliage, they would at once ascertain that they were surrounded, not only by the beautiful in form, but by the rare; they, perhaps, carry away with them an impression that it is the monuments, and the river, and the general views, that have so struck their minds; but the element of variety in the trees was still one of the charms. We are planting, in this age, for posterity, among whose countless throngs there will be a larger proportion of educated observers than there is now. These burial places, too, have a permanency of character that no other spots can aspire to, and here the next generations will expect to find examples of well-grown trees from which they can form some ideas of what they should plant themselves, in grounds of their own; the time taken to attain certain heights will here be studied. It is, in fact, as leaders of *public taste* that we look upon public cemeteries as of much importance. One can form a tolerably correct idea of the neighboring community, by seeing the condition of the best cemetery of a city; the evidences of the cultivation of the people will here be displayed, and judged of accordingly.

We have exhausted the space designed to name the trees that we deem suitable for the purposes requested, and must postpone to another date some further remarks on the subject.

## DOYENNE D'ALENCON PEAR.*

Among the European winter or late pears, perhaps we have no better than the Doyenné D'Alençon (or new Easter Beurré, Doyenné D'Hiver Nouveau). Its qualities have been fully tested in many States, and prove to be uniformly good.

*Tree*, a fine, handsome grower, succeeding well on both stocks, quince or pear; a good bearer, and requiring but little pruning. *Fruit*, obovate, pyriform, medium size, heavy and solid. *Stem*, about one inch in length, medium size, and swollen

* See Frontispiece.

at the base, and inserted in a shallow cavity, sometimes without any depression; eye closed, medium, and not deeply sunk. *Skin*, ruddy, pale green at the bottom, but dotted and speckled all over with numerous dots and shades, ripening, in some localities, with very rich, decided colors, which explain its synonyme of Doyenné Marbre (or marked, spotted Doyenné.) *Flesh*, white, firm, buttery, juicy, with flavor and sugar enough to make it a very fine winter fruit; not so high flavored as its congener, the old Doyenné D'Hiver (or Easter Buerré), but very pleasant, and destitute of grit, stones, and bitter spots, which so often render that fine fruit worthless.

Taking into consideration that the Easter Buerré yields only an average of one-half or one-third of a full crop of "very good" pears, we must look to the D'Alençon, if not as a substitute for the old Easter, at least as a valuable addition to our scanty stock of winter pears.

We ought to designate this pear under one of its synonymes, but its other name, Doyenne D'Hiver Nouveau, is altogether too long. "Six-legged" names should be avoided, when possible, in naming fruits.

## PEAR CULTURE, NO. 4

BY DR. J. M. WARD, NEWARK, N. J.

To redeem the promise with which my last article closed, I shall proceed at once to consider the causes of the failures of some varieties of pear that ordinarily do well on the quince, and that, in other positions on my own farm, are among the thriftiest of my trees. These causes constitute some of the most prominent objections to the substitution of the quince for the pear stock, in the cultivation of the pear.

The quince is a native of Japan. "The climate," Malte-Brun says, "is variable, abounding in genial rains;" that "during the autumnal months, particularly," the season of all others most trying to our fruit-trees, "much rain falls;" and adds, "it is a country in which thunder is heard almost every night in summer, and where showers and hurricanes abound." In the recognition of the fact that nature has adapted the quince to those of its native islands, may we not divine the reason of the admission by horticulturists, that the quince delights in moist places, and are warranted in saying it still retains, and, in obedience to nature's law, ever will retain, a demand for those conditions of soil its constitutional adaptations require.

With this stand-point, we can respect the authority of our fruit culturists, when they tell us "it will thrive where the cultivation is rich and deep," for the reason that if the substratum of soil is highly retentive of water, there the requisite degree of moisture for thrifty growth may be secured. Without this, failures will occur that will disappoint the expectation of the culturists, and give discrepancy of testimony to their teachings, while each may be in perfect harmony with their experience.

In one part of my orchard, the dwarfs have proved a decided failure—the part, too, where, the reader will bear in mind, the trees had enjoyed the richest culture, and received the greatest care—while those removed to a distant part of the same field, exhibit great precocity of growth. The cause is to be found unquestionably in the fact that the soil of the latter is underlaid by a clay substratum, while that of the former is a gravelly loam.

Downing says: "The quince grows *naturally* in rather moist soil, by the side of rivulets and streams of water." Thomas adds: "The soil for the quince should be deep and rich—a rather moist soil has been preferred by many, though not essential—deep and enriching cultivation being of incalculably more importance." The importance of deep and rich cultivation we admit, but unless it be in connection with a moist soil—such as a proper substratum only will give you in our climate—failures will be the rule, and successful culture the exception, as fruit culturists will testify when their observations are made matter of record. And since, in all probability, but few of those who have embarked in the growing of the Pear on the quince have been aware of the necessity of studying the habitudes of the stock, it will be strange, indeed, if expectations of success should fail to be realized from this cause alone.

But the most weighty objection to the general introduction of the dwarfing of the Pear is, that in a great majority of cases the orchard-trees, especially, will not receive sufficient attention to secure success. A Pear-tree, once established in any soil of moderate tilth, will take care of itself, will ordinarily find nutriment enough to secure vigorous growth, will at least make progress in the world, and bear fruit. Not so with the dwarf. The range its rootlets travel for food is circumscribed. Numerous as those rootlets are, they will soon exhaust the soil of the food nature has supplied, and if attention is not given it—and good attention, too—it very soon shows its neglect. And good feeding is not all that is required. If well fed, it will give you towering shoots; these you must repress. *But*, with this, your work is not done. Your spring pruning, laboriously completed, is soon followed by a call for June pinching. And, again, your autumn shortening must not be neglected, or your reward for high culture will consist in great luxuriance of growth, which, though pleasing to the eye, will not satisfy the palate. And, furthermore, in orchard culture, in our country of abounding high winds, with occasional thunder-storms, the culturist who neglects to *shorten-in* will sometimes find the reward for his labor unexpectedly given in a prostration of his heavy-laden trees, and his hopes together. The separation is so readily made at the usual swelling over—just at the junction of the graft with the stock—that it is not unusual, under these circumstances, for this accident to occur.

This repressing of the *wood force* by the usual spring pruning, June pinching, and August shortening-in of the shoots, when described to the novice, appears more like play than work; and, when demanded by the few pet dwarfs in the garden of the amateur, is truly pleasant recreation, but, to the orchardist—with knife in hand—the work of thus preserving a due relation between the wood and fruit principles in his hundreds of trees that have already attained the size good cultivation for a number of years has given them, is the imposition of no slight task. Very few have any adequate idea of the labor demanded, and fewer, still, when they learn it have moral courage manfully to meet it. Untrained laborers cannot here be trusted—one's *own* hands, or those of a judicious gardener, must do the work.

Cowper has well expressed the feelings of the orchardist on this subject, when he says:—

"These, therefore, are his own peculiar charge;
No meaner hand may discipline the shoots,
None but his steel approach them."

"He disposes neat
At measured distances, that air and sun,
Admitted freely, may afford their aid,
And ventilate and warm the swelling buds."

Touching the varieties worthy of general cultivation on the quince, I would fain speak reservedly. As yet, my experience is too limited to warrant saying much. Happy would I be, Mr. Editor, if some one of your able correspondents would come to my relief, and take up the thread of the subject just at this point.

Mr. Rivers, that most accomplished English pomologist, says, out of one thousand varieties of Pear in cultivation, he grows but four for the Covent Garden market—three of these are on Pear stock, the Louise Bonne de Jersey alone on quince. No judge of Pears will dare to lift his voice disparagingly to the character of that most rapid growing variety, uniformly bearing abundant crops of well-formed fruit, which, though not of the highest flavor, is yet such a pleasant sub-acid, as to be a universal favorite.

Our experience in this country certainly demands that the Duchess d'Angouleme should, of all others, be cultivated on the quince—the more vigorous growth of the tree—together with the improvement in the quality of the fruit, secures to it, in my judgment, above all others, a substitution of the quince for the Pear stock.

I have not, Mr. Editor, said all of what I had designed to say on this subject; and, if you will accept as an apology my present pressing engagements, even to weariness, in the garden and orchard, for discontinuing, for a time, the completion of the series, when another season has enlarged my observations, I promise a return to it, unless, in the mean time, some abler hand shall render the labor superfluous.

## THE WALTONIAN PROPAGATING CASE.

BY D. BEATON, LONDON.

THE application of hot water to the heating of horticultural structures, was a long step in the advance of progress. Since then, efforts have been constantly made to improve on and simplify the principle, so as to obtain the greatest results at the smallest possible cost.

The Waltonian Case, of which we give, herewith, cuts from the *Cottage Gardener*, is one of the latest improvements, the chief feature being that the water is heated by a lamp, instead of an ordinary fire. It seems to answer its purpose very well, and will be quite the thing for many of our amateur friends, while the principle on which it is heated will afford a hint to many of our more professional readers.

Mr. Beaton, one of the most practical of English gardeners, thus speaks of its success there:—

"I must repeat, that I never saw a better contrivance for amateurs to strike cuttings and raise seedlings with than this of Mr. Walton's, and that there is not a better mode in existence as far as I am aware of. There is nothing better in any of the London nurseries I have seen; nor at any of the botanic gardens; nor, in short, anywhere.

Hot water, without circulation, is now proved to be as good, on a small scale, as it is by circulation on a large one. Mr. Walton's first idea was to apply the heat of a lamp, or gas jet, to the bottom of a tin can, by means of a double bottom or "false bottom," and on that principle his own Case is still worked. In the present form of it, the heat is brought direct into the body of the water in a zinc tube,

coiling round and round, then out through the back of the Case, to carry off the smoke and smell; and the principle is the same as that by which the water in the basins in the Crystal Palace is kept warm; hot water-pipes heat the water in the basins, and a zinc pipe heats that in this apparatus, being heated itself either by gas or oil. But, where gas can be applied, I would recommend it as far preferable to a lamp, because there is no bother about snuffing, trimming wicks, or keeping a lamp clean. A lamp must be trusted to a servant when the master is out, and if he neglects it, your batch of cuttings may be dead and gone before you come home. But as gas cannot be had everywhere, I subjoin Mr. Walton's description of his own Case, with sketches to illustrate the working, premising that his fears about the draught from the lamp through a coil of tubing were groundless when the gas was applied, and that nothing acts more satisfactorily with a very small jet of gas. Neither is it necessary to begin with hot water if that in the tin case should get cold at any time. Also, that what he means by the lamp burning for eight hours, is not that the half pint of oil is consumed in that time, but that the lamp requires trimming at the end of eight hours."

Mr. Walton, the inventor, thus describes his Case:—

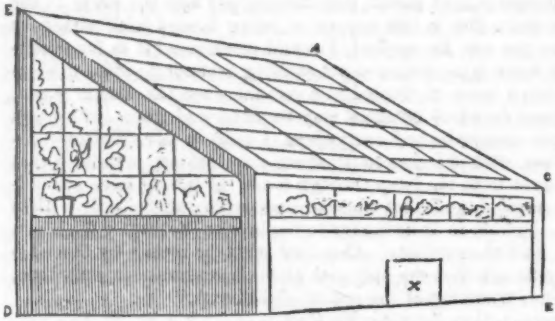
"The box I used was an old one, to which I added a top, so as to give an inclination, as in a garden frame. Half way down, in the inside, a moulding is nailed, on which the zinc frame rests. The pots are placed on the zinc frame. The boiler is of tin, surrounded by a false cover of tin, which I found necessary to create a draught for the lamp. A small chimney runs from the inner boiler, through the false cover, into the frame; and, although the water does not boil, the steam, or moisture, keeps the frame damp. The false cover has a chimney which runs through the frame and out at the back, to carry off the smoke, if any, but there ought to be very little. The lights are divided into three, and are merely fixed in zinc frames, not wood, and let into the top, to lift on and off, or tilt. This is better and cheaper than glass in a wood frame, as the water (why, I cannot tell) does not drop inside, but rests on the outside, and may be tilted off. The lamp was made by Smithurst, of Bond Street, but is quite plain and circular, holding more than half a pint of Colza oil. It must be well trimmed, *so as not to smoke*, and then will burn eight hours. A tin lamp will do just as well. The smoke does not get at the plants, but would collect at the bottom of the boiler, and fall on the lamp.

"The lamp is three inches high, and four inches across. If trimmed at night, it will be alight in the morning, and should be trimmed in the middle of the day. If the lamp should go out, and the water become quite cold, draw off some and add *hot* water, otherwise the lamp will not burn. I have raised from cuttings, *Roses*, *Verbenas*, *Fuchsias*, and *Dielytra spectabilis*, and it is excellent for forcing seeds of all sorts. Mr. Beaton, our gardening authority here, says it will raise anything that can be raised by heat, as it is so clean and moist. He has suggested an improvement, which I intend to try; which is, to do away with the outer tin case, and to insert, at the bottom of the boiler, a coil of zinc tubing, and to carry it out through the case as my smoke is now. This would be more simple, but I very much doubt if the lamp would have sufficient draught to burn. Mr. West, the ironmonger here, has made them complete for 35*s*.; but he could make the boiler apparatus, tin lamp, &c., separate, and you could have the zinc tray and box made in the country to fit the boiler."

The following description of one by Mr. Beaton, will fully explain the structure in all its details. It is no doubt capable of many improvements, of which our "Yankee genius" will not be slow to avail itself:—

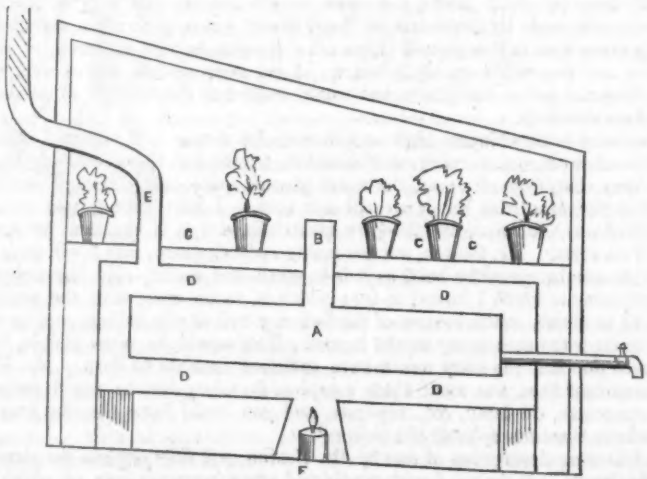
"My lamp is copper, but tin would do as well. It has an extra head to burn

three wicks instead of one, which add much to the heat, but I found one sufficient. The lamp holds more than half a pint of oil, is three inches high, and four inches across.



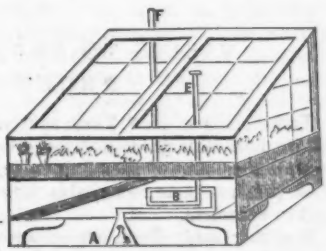

A to E, 2 feet 8 inches. A to C, 1 foot 9 inches. C to E, 1 foot. D to E, 2 feet 7 inches. X, door for lamp.

"The best size for the box is thirty-four inches long, seventeen inches wide, thirteen deep in front, and eighteen inches at the back, all inside measure. Such a box will hold three rows of No. 48 pots, and six pots in a row; or four rows of No. 60, and eight pots in the row. When making a smaller, or a larger box, one ought to fix on how many of those two sizes of pots the box would hold conveniently without loss of space. An amateur should never use a pot larger than a 48 for striking cuttings, and that size is large enough for all his seeds. The tin case to hold the water should not be less than four inches shorter or narrower than the box inside, which leaves two inches between the tin and wooden boxes at the ends and sides, and it should be four inches deep; then, when the heat is raised to 80° or 85°, it matters not if the lamp, or jet of gas, should go out for some




A. Boiler. B. Steam chimney, opening into the middle of box through the zinc tray. C C C. Zinc tray. D D D. Outer cover to boiler, through which the heat is conveyed from the lamp round the boiler, and the smoke out through E. H. Tap to draw off the water.

hours, or as long as the heat keeps up to 70°. If the size of the tin box is so small that the body of water in it is not sufficient to keep up the heat for several hours without a constant burning of gas, or oil, the first expense will be less, but the disadvantage would be in greater proportion. The lid of the tin case is made in the shape of a tray, with the edges raised about half an inch, so as to hold sand on which the pots stand; a tube, five or six inches long, and about an inch in diameter, is soldered to the lid to let up vapor, not steam, from the hot water, so as to keep the air sufficiently moist for the health of the cuttings or seedlings. If too much vapor rises, cork the tube. Make the tube also to index the depth of water by a float—a piece of cork with a small stick fixed in it, and rising through the tube; but it might be supplied from the outside by another tube, and a tap to empty the water may be applied. But I see no use in that, as the lid is not fixed in the present case; it fits like the lid of a teakettle, and as closely, so as to let off no steam or vapor, and the raised rim of the lid projects an inch beyond the edge of the box. You begin in February, and, when you leave off in summer, the whole should be opened, and receive a coat of paint, and there is no occasion to draw off the water by a tap in the mean time. The tin box rests on the bottom of the wooden box without anything between them; but the two-inch spaces at the sides and ends should be filled up with sand to the level of the sand on the lid. The end of the tube for heating passes down through both the boxes, and ends with a funnel head to receive the jet, and there is a 'nest' for holding a lamp. The wooden box stands five or six inches from the ground, on legs, after the manner of a chest of drawers. The sashes to cover with may be like garden-lights, or in one piece of stout glass let into a zinc frame, to move 'off and on;' or the top may be hinged on and locked, like a desk; and, as I said before, the whole may be made to suit a drawing-room, where it would 'work' just as well as anywhere else. It is not calculated for the open air."




A. Gas jet under the funnel head. B. Coil of zinc tube, one inch in diameter. C. Lid covered with sand. D. Pots of cuttings or seeds. E. Vapor tube. F. Smoke or smell tube.

In a subsequent article, Mr. Beaton says: "My anticipations about the success of this simple method of striking cuttings on a small scale, are more than verified already. From the middle of last February—the only time left to Mr. West for testing the practicability of the contrivance—he has been unremitting in his experiments with cuttings, plants, and seeds, under a lock and key. He has simplified the contrivance, and lessened the expense of working it with oil or gas. His own lamp will burn twelve hours without trimming, and heats the Case just as easily as the gas; but still, a jet of gas is more handy, and less trouble.

"We have discovered another very important use of the Waltonian system: it may be successfully applied as bottom and top-heat to a Wardian Case, full of orchids, or of any other section of plants—Ferns, Alpines, and all; a portable hothouse system, in fact, which will do for the top and bottom-heat equally well at the same time. The whole family of *Anæctochilids* and *Physurads* may be grown in a drawing-room by this means, in a close Wardian Case of the highest finish, just as easily as in an orchid-house. By the vapor tube you may admit as much

moisture as the air will hold; or, by corking it, the heated air inside might be rendered sufficiently dry for a Melocactus or a Mammillaria. You may fix on the proper degree of heat which will best suit your Wardian Case, from 40° to 65° or 70°, or more, and with a common lamp, quite out of sight, the required degree is kept up nobody knows how. I should not wonder to see one of them at work in the Crystal Palace. If I wished to push the Wardian Drawing-room Case into the world, I would place one or two of them there, to be heated to the right pitch by the Waltonian system of bottom and top heat. With the Waltonian Case for propagation, you cannot have the cuttings too close, but, if you raise seedlings in it, they must have fresh air as soon as they are up."

## VISITS TO COUNTRY PLACES, NO. 1.
## AROUND NEW YORK.

THE vicinity of New York, as might naturally be expected where commerce has left its most remarkable imprints, and has consigned to the industrious and successful an amount of spending money nowhere else, in this country, to be paralleled, presents some remarkable features of rural life and adornment which it is well to chronicle.

Breaking away from our editorial chair, we have lately made excursions to some of these spots, omitting, for the present, many places that are worthy of remark.

We first visited Dr. J. M. Ward, near Newark, N. J. The doctor is engaged in the laudable pursuit of fruit culture, for the New York market. This he does from a love of the subject, no less than with a view to the benefit of himself and his family; his example is one which we should be glad to see followed by other gentlemen, who, by showing what may be done by the employment of capital and intelligence, will be the means of teaching others, and thus a better supply of wholesome fruit will be at the command of our great cities, now but half supplied. The demand appears to be unlimited; in New York, for instance, his agents, the middle men, a class of honest dealers who have risen up since the mode of *sending* fruit by wholesale, instead of accompanying it, and chaffering for the market value, keep an account of the quantity received from each cultivator, and allow full returns in a most business-like way. Thus one of the most serious difficulties is obviated. Dr. Ward employs pickers at so much a bushel or quart, and by the hour; he can be mostly at home to superintend these operations; the fruit is forwarded by a regular steamboat, consigned to the middle-man, who receives it within an hour or two, has his market engaged for each variety, and the distribution goes on like clock-work. You may leave Dr. Ward's at breakfast-time, and dine at Delmonico's, on his strawberries, which were being picked when you started; or be at a private party in the Fifth Avenue, in the evening, enjoying his grapes or pears, which left Newark at four o'clock.

The proprietor enjoys a great advantage of his own; as the fruit ripens by degrees, the first picking of grapes, blackberries, or strawberries, being insufficient for market, the family have the earliest for themselves and their friends, and, by the time the period of abundance has arrived, they have probably had sufficient to satisfy all, and can devote the whole remaining crop to sales. Dr. Ward has five acres of strawberries, an acre and a half of raspberries, one acre of grapes, two hundred cherry-trees planted along his paths and roads, in such positions as not to injure the other crops by their shade, one thousand pear-trees, standards

and dwarfs, half an acre or more of currants, and his place is beautified with shade and ornamental trees, forming a *tout ensemble* of plenty and beauty such as thousands living in cities might envy, and if they would study the subject as the doctor studies it, might reap rich returns from.

Though this place has been in the tenure of its present owner but ten years, the returns are already nearly sufficient for the wants of a large family. The strawberry culture is of recent introduction, and we shall be surprised if the entire returns of the present season do not considerably exceed three thousand dollars, with abundance of all farm produce for himself. Surrounded by beautiful scenery, fine wood and water, an intelligent home and visiting circle, our friend and correspondent enjoys a life much to his own taste, and confers a useful boon on his fellow-men. In winter, the family remove to Philadelphia, where the doctor lectures to a class of medical students, and attends to the education of his family. This is a picture so pleasing to the mind, and so eminently worthy of imitation for its utility, that our host will pardon our holding it up in this way as an example to others. Already his neighborhood is benefited and improved by seeing his success; in a few years, this section of New Jersey will be a main prop in supplying the greedy maw of its neighbor, New York, to the advantage of both.

Dr. Ward, after much examination, has adopted the Iowa or Washington Strawberry, as producing a large and valuable crop. Burr's new Pine, he thinks, will prove too soft for a carrying crop, though its flavor is unsurpassed. The Early Scarlet follows Iowa in ripening, and is a good market kind. Hovey's Seedling he considers an excellent market crop, and that it must always continue to be valuable. Several other kinds are under experimental cultivation. We were so fortunate as to be there at the earliest picking, when the citizens were paying any price demanded for the first berries of a good size and from the neighborhood, the Southern ones being discarded as soon as the Jersey crop made its appearance. The pear-trees here will yield an average crop, which may be worth a thousand dollars; much more than this sum will, no doubt, be realized per annum, when the standard trees come into bearing. Dr. Ward has himself enlightened our readers on his mode of pear culture, so that we need not enter now on the subject. All the larger cities of the Union, and even very many small ones, offer inducements to cultivators to pursue the system we have faintly indicated. A few years only will elapse before this gentlemanly system will be extensively imitated.

We also visited the nursery grounds of Mr. William Reed, of Elizabethtown, N. J., which are among the neatest and best kept in America. His lawn around his house was so neatly sheared, and in such fine condition, as to put to the blush many grand gentlemen's seats. Mr. Reed is famous for the beauty of his specimen hedges, which he shears twice a year, in June and September. The three-thorned locust, *Gleditchia triacanthos*, he considers to be the best for a farm hedge, superior to the Maclura for turning cattle, and having this advantage, that when planted close, if neglected, it still forms an impenetrable fence. His beech, arbor vitæ, holly, juniper, Japan quince, and other hedges, are fine examples of beauty added to scenery by this method.

We saw here fine specimens of the Magnolia conspicua, Purple Elm, Pinus palustris, or long-leaved Pine, White Spruce, Juniperus oblonga pendula, and Communis pendula or Cracovia, Savin, Halesia diptera, a plant now much sought after, the Holly-leaved Cherry, and many of the new Evergeens and rarities which he takes pleasure in introducing. Mr. Reed's nurseries are all drained, and he therefore lifts his trees for spring sales at an earlier date than others; broad avenues of well pastured grass intersect his grounds, and through these the water from the drains trickles in the driest seasons. Every nurseryman should see Mr.

Reed's establishment; there are few who could not reap advantage from his example.

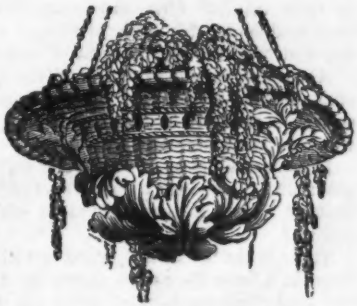
Our next will conduct the reader to Staten Island and the North River.

## DECORATIVE ARTS.

To those who know the power of art to educate and refine the taste, the social life and character of a people, it has always been a cause of regret that the appreciation and enjoyment of it should have been long confined to the few whose wealth was equal to the purchase of its costly decorations. We believe that art

is capable of accomplishing all that is claimed for it by its most enthusiastic friends, when our life, in all its pursuits, is brought into daily contact with its productions; when its works are no longer a monopoly, but an every-day possession, within

the reach of the workman as well as the millionaire. Within a few years, this has become possible, by the discovery of new methods and materials capable of producing works of high art, with beauty unimpaired, and at a price which makes them accessible to all. The introduction of Parian, a comparatively new material, has given to these manufactures a feeling of art, and a power of expressing it unknown in other materials. Sculpture is rendered by it more faithfully than pictures by engraving. The rich, transparent tone, and semi-opaque shadows of marble, preserve all their softness in Parian.



The first group above is a collection of pillars, vases, and seats, for the garden, and here is a hanging basket in terra cotta, intended for the parlor cultivation of orchidaceous or trailing plants, now happily becoming an enlightened pastime with the ladies. A cultivated taste for flowers ranks with *connaissance* in the Fine Arts, as indicating intelligence and refinement. It is a pity that any one should wait for expensive greenhouses, to gratify that taste. A few vases and hanging baskets are all that is requisite to realize as much pleasure as can be gained from the princely gardens of Chatsworth.

## LOMBARDY POPLARS, &c.

BY P. G. BERTHOLET, BUCKS COUNTY, PENNA.

DEAR EDITOR: L. F. A. has contributed an article on "Lombardy Poplars," to your excellent journal. He seems to hold it in very high estimation for ornamental purposes, calling it a "universal tree," and after presenting it as an entirely faultless tree, even not suckering, &c., finally urges us to "give renewed life to this long-neglected Lombardy Poplar."

"Not suckering!" it may behave so well about Black Rock, but certainly, in this locality, I could point out places where it has spread over acres by no other process, and so densely, presenting an appearance not unlike the impenetrable cane-brake; the ground being overgrown with its roots, to the exclusion of everything else, all sending up shoots from every available point. Would that be desirable for the ploughman? Who would like such an acquisition for our gardens and lawns?

It is a tree that, with us, has had its day for planting—but, unfortunately, it takes care of itself. It has become inexterminable, and acts the part of a weed rather than an *ornament* (unless you make no distinctions as to conduct); yet we prefer a proper name by which to know all things, and arrange accordingly—for everything should have its place, and nowhere is this more essential than in landscape gardening to be carried out with good taste.

We have all the requisite materials in our own Sylva, for (all) ornamental purposes; these are, unfortunately, the *too much neglected*. There is entirely too much desire—a morbid taste—for foreign acquisitions in planting, by which our natives and oft far superior materials are left uncultivated and neglected. Now

this is wrong, and American journals on horticulture should lend encouragement in the direction it is most needed.

Nature has furnished us with the most complete patterns for planting, and associated her particular varieties of trees, rocks, water, and lawn, most desirable for us, and wherever we trespass upon this rule, we lose sight of the great object for which landscape gardening was instituted, namely: to re-establish by art, genius, &c., as though planted by the hand of nature, what have become to us so lovely in their original form and composition. It is simply to re-establish, in some cherished spots, this state of things, where the unrelenting axe of the woodman has destroyed the last remnant of nature's superior planting.

According to some this tree is too stiff; so it is. We want the more graceful elms, sublime tulips, and majestic oaks, and regret that men with taste would supersede these, in any way, with thin, tall, gaudy, dandy-like L. poplars. They won't do for Americans.

If such a thing as *straight lines* are essential in landscape gardening, why cannot such be effected by our red cedars, junipers, arbor vitæs, &c., of our own country, which are certainly more effective, graceful, and beautiful, than the L. poplar?

There is the Ailanthus, worst of all. It proved a deceiver to those who first brought it from its native shores in Asia (they took it for an improved *sumac*), and when these speculators found out their error,* they contrived to retrieve their loss by presenting it to the public as an oriental ornamental tree, calling it Tree of Paradise, &c. But it has equally cheated those who were, by these high-sounding names and false graces, misled to plant it for ornament, in place of our own trees, far superior in beauty, and I doubt whether any spot was ever rendered more celestial by planting it with this misnamed "Tree of Heaven."

We do not want this Asiatic trash in America; let us devote our attention to those we have, and something will be accomplished of real stability; and, besides the objectionable qualities, its suckering propensities are fully equal to the Paper Mulberry (a cousin from the same country), and then, when the season of blooming roses is at hand, and lilies render the air redolent with sweet perfume, how contrast the exhaling fumes of the Ailanthus! if not actually unwholesome, it is certainly very obnoxious.

It is said that these trees grow fast, and this quality is sometimes urged in their behalf, as an inducement to plant them. It is often the case, *too fast things* have a bad end.

No fair lady is prized or appreciated more than the one who is won after an anxious and attentive course of courtship; and so in this case. Our native trees may not grow so readily nor so rapidly as these exotic weeds; they may require a little extra attention—courting, if you like—but, if once gained, if once established, would not by me be exchanged for the whole catalogue of these foreign trees that have been of late crowded upon us.

Let us cultivate our own—these are at home with us—and note to what degree of perfection we can attain, and not until this great catalogue is exhausted, let us call in foreigners for our ornamental planting.

* It proved indeed a Tartar.

## GOLD OF PLEASURE.—CAMELINA SATIVA.

PACKAGES of seed of the above plant having been distributed from the Patent Office, and having had numerous inquiries respecting its nature and use, we may state that it is cultivated for its seeds, which yield oil of a useful nature, either for purposes of illumination, lubricating machinery, or mixing with paints. The cake formed after extraction has also been found highly nutritious in the fattening of oxen and sheep.

It appears, from statements that have been made, that 10 lbs. of seed are required to an acre of land, which will produce, under favorable circumstances, 40 bushels. Eight bushels weighed 448 lbs., and gave 112 lbs. of oil, and 336 lbs. of cake. Thus it appears that an acre will produce 560 lbs. of oil, and 1,680 lbs. of oil-cake.

It will flourish on poor soils, unfit for ordinary grain crops, and stands drought well. The seed is ripe as soon as the pods change from a green to a gold color, and should be cut before over matured. It may be worthy of trial; the illustration will give an idea of the plant, which is annual. It requires similar treatment to buckweat.

## GRAPES AND WINE.

### REMARKS ON THE GRAPE DISEASE OF EUROPE.

BY J. F. ALLEN, OF SALEM, ESSEX COUNTY, MASSACHUSETTS.

A FEW years since, the "mildew," a parasitic fungus, made its appearance upon the grape-vines of Madeira, and has since been extending itself over the vineyards of Europe, upon which I propose to make the following remarks, having given much attention to grape culture, and investigated, as well as I was able to do, the diseases to which the vine was subject in the United States. I felt sure, after reading the first printed descriptions of the evil, that it would prove to be the

mildew of America, attacking, as it does, the Eastern and European varieties of the grape at midsummer, destroying the entire crop of fruit, so frequently as to discourage its cultivation. The occurrence of very dry, clear weather, in July, will prevent the vegetation of the sporules or seeds of the fungus; and thus the Chasselas and the Black and White Cluster Grapes will ripen fully in most of the New England States. This will happen not oftener than once in ten years; and it is then said we have had a fine, warm season, when the average temperature has not been greater than usual, and the actual cause, the dryness of the air in July and August, is overlooked.

The climate of a large section of the Northern States is well adapted to the cultivation of the grape. There are many varieties of the vine that will withstand winters of equal severity; such, for instance, as are cultivated in Germany, on the Rhine, &c. Why, then, have all attempts to grow these varieties in vineyards in this country proved failures? Because of the attacks of this fungus, as stated above. It usually appears, in Massachusetts, in foggy weather, in July and August, and not earlier. When first seen, it resembles white mould; and, if examined when in this fresh condition through a powerful microscope, it is very beautiful. In the Agricultural Report of the Patent Office for the year 1853, page 311, there may be found an engraved illustration of this mildew fungus. It appears in a communication to the State Department from Nicholas Pike, Consul of the United States at Oporto. This is a correct representation of the American mildew, and leaves no room for doubt as to the identity of the two species. The marks of the mildew can be found on the imported grapes and raisins brought here from Malaga. This is similar to those made by our mildew on the same varieties of the grape. On page 312 of the same Report, is an illustrated specimen, showing its effects upon the fruit. When a grape becomes affected by it, the fruit will either dry up or crack open, as in this specimen, unless checked or destroyed before it makes much progress.

This so-called disease is a living plant, most rapid in its growth, and wonderful in its powers of reproduction and multiplication. It would appear to be a most serious evil to the people of the countries dependent upon the cultivation of the grape for their subsistence. When a vine has once been infected by it, the seeds or sporules, in countless millions, lie waiting a favorable atmospheric change to spring into life; and when this does occur, so rapid is their growth, that in the short space of one day, the under side of the leaf will be almost covered. If the vines are constantly watched, particularly on the under side, and, when the first appearance of the fungus is noted, the flour of sulphur is dusted upon the leaves; this will kill the fungus wherever it comes in contact with it, changing it from white to black, and then it is dead. The difficulty here is in applying the sulphur to the under side of the leaf. It is hard to make it remain in this dry state; and it requires so much labor to go through a vineyard in this manner, as to make the cost, perhaps, an unwarrantable outlay; unless it should prove to be the case, which I think may be so, that after two or three years' application of the sulphur, the seeds of the fungus would be exterminated. I have found a wash quite effectual in destroying this fungus. It can be applied more easily and surely, and with less cost of labor and material. It can be applied on a large scale, with the garden engine; on a smaller, by the syringe or the rose of a watering-pot.

To prepare this wash, take one peck of lime, not slaked, and one pound of sulphur; put them together in a barrel, and pour hot water over them sufficient to slake the lime; see that the sulphur is well mixed with the lime; pour on this three gallons of soft water, and stir the mixture well together. In twenty-four

hours, it will have settled and become perfectly clear. This should be drawn off as clear as possible. Half a pint of this mixture, added to three gallons of water, will be sufficiently strong, and may be applied over the fruit and every part of the vine when the mildew first appears. It can be repeated every few days, if occasion requires. The first application, I have found, would kill the most of it; a second and a third is all that I have ever found necessary for the season. The fruit and foliage have ripened fully on the European varieties. The American or native varieties are less subject to the attacks of this fungus than the European. There is also a difference in these, the "Catawba" and "Isabella" being more attacked than some other kinds.

That this mildew, or fungus, requires a peculiar condition of the atmosphere to allow of its vegetating, is a hopeful fact for the people of the European grape growing regions. A series of seasons unpropitious to its growth may destroy the millions of sporules, or seed vessels, deposited upon their vineyards. Should not this occur, they are not without hope, as sulphur, and a preparation of sulphur, will destroy it. Perseverance with its application, will keep it in subjugation until the favoring season arrives for its final extermination.

## CLIMATOLOGY, GRAPE CULTURE, &c.

BY A. HUIDEKOPER, MEADVILLE, PENNA.

Not being a Doctor of Horticulture, with any specialty to advocate, I will have to ask indulgence if my present article is a little promiscuous in its character.

To begin with that very trite subject, the weather, we have had within the last thirty-six months a very dry season, a very wet, a very hot, and a very cold one. All the weather prophets have been at fault, and the auguries, whether based upon bird, or animal, or vegetable phenomena, have been alike deceptive. If the weather is not the result of a present exercise of the Divine will, but is governed by established rules, they are certainly thus far inscrutable to humanity.

In this section of the county, according to a very conservative thermometer kept by Professor T. F. Thickstun, who makes observations for the Smithsonian Institute, the mercury has stood, between the 26th of December and the 21st day of March, twenty-four times below zero, the lowest degree reached being 27° below 0. Instruments in other parts of the village gave four or five degrees below this. Another unusual feature in the weather was the absence of any rain from the 22d of Dec. to the 2d of April, a period of over 14 weeks. On the other hand, the snow, which commenced falling about Christmas, lasted until the middle of April, and accumulated in many places until it was thirty inches deep on the level.

A temperature, several times reached, of from sixty-five to seventy-three degrees below freezing point, of course left its mark pretty deeply on the orchards and ornamental shrubbery.

There is a sad list of killed and wounded, and a very *crymean* air of grief about amateur cultivators. Quinces and roses are killed down to the snow line; Chinese arbor vitæ and many other evergreens are done up brown; the box wood is blanched; peach-trees, if they have any vitality left, will have to submit to severe amputation when new buds have formed; and dwarf pears are more or less affected. Notwithstanding all this, there is much of beauty left in our groves and fields. The snow has protected the winter grain, apple and standard pears are showing their blossom-buds, and we shall probably have a good supply of strawberries and the smaller fruits. Cultivators will hardly relinquish shrubbery

of rare merit because once in the course of many years it is destroyed by an Artic winter. Yet popular attention will be directed, as it should be, to the hardier class of trees and shrubs in our country, which we are too apt to overlook. In making a selection of the former, however, I can hardly say that I agree with friend Allen (who always writes a spirited and sensible article) in adopting the Balm of Gilead, Athenian Poplar, or Cottonwood.

I carefully eradicated them from my own grounds some years ago, and induced one of my neighbors to do the same thing by the proffer of some sugar-maples as a substitute. They undoubtedly grow rapidly, and look well when young; but they are softwooded, easily broken by storms, great monopolists of soil and space, much given to sprouting, and lack durability. Being large when grown, an equal and more permanent amount of beauty can be obtained by the selection of trees of less objectionable habits. Friend Allen has almost redeemed his tree by that story of the oriole's, but I can assure him that I parted with no birds when I laid an axe to the roots of the cottonwood.

In speaking of Mr. Allen, I fully concur with him in the report he makes to the Western New York Fruit Grower's Association about the "Ladie's sweeting apple." After trying it for two or three years, I have rejected it, as quite below in this region the qualities attributed to it by Mr. Downing.

The failures of fruits from frosts and severe winters will turn attention to the growing of grapes under glass, and in connection with this subject, I would mention that having occasion this spring to remove an old grapery, I found the studding and boards much dry rotted by the tan, with which the walls of the building had been filled. The tan seems to be unnecessary, and for the reason I have given had better be dispensed with. A span roof on a north and south line gives the vines a much greater amount of solar light and heat during the day than a lean-to grapery, with a southern exposure, and the temperature is more equal. As we have sometimes violent winds when it is too warm to close a grapery, fine wire screens over sliding sashes in the ends of the building admit of ventilation, while they break the force of the wind; they also exclude beetles and other insects.

There seems to me to be a debatable philosophy in the reasons given by some of our best writers on grape culture on the subject of ventilation.

Keep the head cool and the feet warm, says Mr. Chorlton (page 24), is advice often given by physicians, and the same rule, with very slight modifications, applies to plants generally. "Nature has no fixed canopy over plants to prevent heat passing upwards," &c. Now we keep our feet warm with cork soles and other appliances, counteracting and not conforming to nature. A seed to germinate requires warmth in the soil, but when the plant or tree is grown, if the soil be kept damp and cool, it will stand the blaze of a July sun on its top without injury. If nature has any rule about it, it would seem to be to keep the roots cool, and the head of a plant warm.

In unison with Mr. Chorlton is a remark of Mr. Saunders in the May number of *Horticulturist*: "Towards the end of this month leave the top sashes open all night, and allow the temperature to fluctuate with the external atmosphere. There is no climate in the world where the temperature is constantly the same."

As a general rule, to give a good deal of ventilation when the weather is warm is good practice, but a grapery should be closed in cold nights, even in midsummer. Analogies are often deceptive, but the analogy with regard to climate and grape culture, if closely observed, would, we think, lead to a different conclusion from that given by Mr. Saunders.

The climates in the world best adapted to grape growing are those which are

marked by uniformity of temperature and the absence of extremes. Uniformity of temperature is then the desideratum, and if we can secure it artificially in a grapery, it may be that we can excel any natural climate in the matter of grape culture. Though the vine will be uninjured by the slight fluctuations of temperature in countries where it is indigenous, it seems hardly to follow that the more violent and sudden changes of our North American climate should be innocuous to it. Light frosts, even in June, with us are not unusual.

I merely call attention to what strikes me as eccentricity of theory in these gentlemen, because I know that in mulching, and sprinkling, and keeping the borders in right condition, and in the regulation of temperature, they are practically no doubt as reliable guides as any we have in the country.

Some of our best writers on fruit culture, investigating new diseases, pear blight, black knot, &c., I notice endeavor to account for them by climatology, cold, unseasonable winds, &c., to all which it may be objected that sudden changes of temperature are not *modern* inventions. They have always been common, and of wide extent, while these diseases break out locally, even as to orchards, and extend themselves from place to place, apparently without dependence on temperature. Atmospheric causes, such as produce cholera, yellow fever, and other destructive epidemics, may have a kindred malaria destructive to vegetation. Insects, fungoid productions, which have escaped microscopic observation, may account for the evils we are considering, but a sudden change of temperature, as a reason, does not accord with all the facts.

We close with the hope that some shrewd observer may do something better than raise objections to present theories by giving us new ones in unison with reason and observation on this "knotty" question.

June 1, 1856.

## NEW PLANTS.

### Echeveria nuda.

E. foliis in caulem strictum altum sparsis obovatis apiculatis glabris obsoletè carinatis, spicâ longâ nudâ terminali.

This addition to the pretty genus Echeveria has been received by the Horticultural Society from Mexico, where it was found on Orizaba by Mr. Botteri. It has a tall, erect stem, covered with smooth, obovate apiculate leaves, and terminated by a leafless spike of flowers, eight or nine inches long. They appear to have been crimson, but the dried specimens, from which alone they are at present known, have only their remains surrounding the fruit. The present species is most like E. coccinea, which has narrower leaves and long bracts, giving the spike a leafy appearance.

Notylia albida, *Klotzsch. Rchb. f. Xenia*, p. 48.

A graceful little thing, deliciously scented, and beautifully formed, although its flowers are no bigger than Peppercorns, and the whole inflorescence the size of an ear of wheat. From a few thin, oblong leaves, not unlike those of *Rodriguezia secunda*, its natural companion, there droops a graceful, dense raceme of whitish flowers, perfumed like a Lily of the Valley. Their back sepal is oblong, convex, pale apricot colored, very firm and convex, and being in all cases turned to the outside of the inflorescence, the flowers are not unlike little fairy shells. The rest of the blossom is transparent white, except one little pale apricot spot at the base of each petal.

Clintonia pulchella (*varieties*). Nat. Ord. *Lobeliaceæ*.—Many of our readers

know and have admired the beautiful low-growing, annual plant, *Clintonia pulchella*. In M. Van Houtte's *Flor. des Serres*, there are figured three pretty *varieties;* they are of similar growth, size, and habit, as the above-named species, the difference is in the flowers. Var. *a*: the flowers are *blue*, with a large *white* centre, tinged with *yellow* at the eye. Var. *b*: the flowers are *white*, tinged at the eye with *yellow*. Var. *c*: the flowers are of a violet color, with a large white centre, tinged at the eye with yellow. They are very distinct varieties, neat and pretty. The *Clintonia pulchella* differs from the *C. elegans* principally by the *upper lobes* of the blossom, which are divergent, and not contiguous.

ARDISIA SIEBOLDII.—This very handsome species was introduced from China by Dr. Siebold. It is a *graceful* shrubby plant; the leaves are about five inches long, notched, of a *shining* green. It blooms in profusion, and produces a proportionate mass of *brilliant scarlet berries;* even small plants, not more than a foot high, are almost covered with these splendid ornaments, and which continue in perfection during the entire winter and spring. It is one of the most valuable plants for decoration of the stove, conservatory, etc., we possess. Plants may be had at 21*s.* each.

CAMELLIA JENNY LIND.—Messrs. Henderson and Son gave £200 to Mr. Makenzie, of Philadelphia, in America, for the stock of this variety. The form of the flower is *most exquisite;* the arrangement of the petals to the very centre is *perfection itself*, forming a true half globe; white, streaked with rosy pink. The present price is from 21*s.* to 63*s.* per plant.

BEGONIA PICTA.—This beautiful new species has been introduced into England by Messrs. Low & Co., of Clapton Nursery. The foliage is exceedingly ornamental, and the plant forms a neat, dwarfish bush, having large leaves. The leaf-stalks and under part of the young foliage are thickly clothed with short, *bright red hairs*. The upper side of the leaves are a velvety green, with a *frosted, white* zone in the centre; sometimes the frosted white extends so near the edge as only to leave a narrow margin of green; the under side of the leaves is of a purple-red color, extending from the stalk half-way through, the remainder of the leaf being green, margined with red.—*Cottage Gardener.*

## THE LATE WINTER, &c. &c.

BY YARDLEY TAYLOR, LOUDON COUNTY, VIRGINIA.

THE effect of the late severe winter being now, in some measure, apparent, it may not be amiss to compare its effects in different localities. We can hardly account for the effect produced on trees and plants here, from the degree of cold indicated by the thermometer, unless we allow something for the long continuation of the cold weather. No thermometer was seen, in this locality, lower than 13° below zero; mine was seen only at 8° below. But I cannot help thinking they have been lower than this. Soon after New Year's day, the wind blew for several days from the northwest, and was very cold; the morning of the 7th, my thermometer was 2° below zero, at sunrise, but, I may observe that, as my situation is much sheltered from the west, the thermometer here does not fall as low as at other places in the neighborhood. On the morning of the 9th, it was again 2° below, and did not rise, during the day, to more than about 15° above. The wind having ceased blowing from the northwest, it began, about noon, to blow from the south, and continued about 24 hours to blow moderately from that quarter. A southerly wind following a cold one from the northwest, is always, for the first 12 hours, more piercing and unpleasant than the other, being accompanied with

a moisture in the atmosphere that makes it exceedingly unpleasant; but, if continued more than that length of time, it always becomes warmer. So, in this case, when the south wind began, the thermometer was about 15° at noon; at sundown it was at zero, at 8 o'clock, at night, 5° below, and, next morning, again at zero. One of my neighbors says his was 13° below at 7 o'clock P. M., so that I cannot help suspecting that the thermometers were lower, during that night, than any of us were aware of.

The peach buds, in many places, are much injured, particularly in valleys and low grounds, while, on high lands, they are uninjured. In my orchard, the more tender varieties are generally destroyed, particularly in the lower part of it. Higher up, the more prominent buds are killed, while a few of the apparently weather buds are now pushing out into bloom. On still higher ground, they are still less injured, but, even there, many buds are dead.

I have a Deodar Cedar, full twelve feet high and twelve inches in circumference at the base, and well branched from the ground, that last fall was a beautiful object, but now presents a sorrowful appearance. All the leaves, with very few exceptions, above the snow line are dead, and the branches look so, too. The lower branches near the ground being covered up with the snow, are not injured, and are now pushing out young buds. The bark and wood beneath looks dark, as if killed, but whether the larger limbs will put out leaves or not, remains to be seen; the smaller twigs are certainly dead. A few green leaves still remain a few feet from the top, near the main stem. This tree was planted, I believe, in 1851, and survived the winters of 1851, 1852, and last winter, except a few of the extremities of the branches.

A Japan Cedar, ten feet high, that was planted out in 1852, has survived the past winter with but little injury; a few of the extremities of the small branches of last year's growth only are killed, and the tree now looks in good condition. It stands on ground about fifteen feet higher than the Deodar; otherwise I know of no difference in situation. This would indicate the Japan Cedar to be more hardy than the Deodar, while the reverse was supposed to be the fact; and, if experience should elsewhere confirm this instance, it would give additional value to the Japan Cedar. The Himalaya Spruce and Menzies Spruce both have lost some leaves, and the latter some small shoots. Irish Yew suffered severely; two specimens were killed down to the snow line, and the third, on higher ground, lost all its outer leaves; the Ivy, too, lost all its outer leaves. Most of our rose bushes were killed above the snow, even when they were inclosed in straw, while those that were laid on the ground and covered up have come out in fine condition. The Evergreen Honeysuckle was killed down to the roots. Paulowonia Imperialis has suffered in its flower buds, and its leaf buds look as if injured, while the bark of the branches looks well. The Pride of India has often its extreme shoots killed for a few inches, but now it appears more hurt—time will only show to what extent.

B. Hodge, of Buffalo, asks for the experience of peach growers in other sections, in regard to the effect of extreme cold weather on peach-trees. In answer, I will relate occurrences that took place here more than twenty years ago. On the morning of the 5th of 1st month (Jan.), 1835, the mercury in the thermometer fell to from 18° to 20° below zero in this part of the country. The consequence was, the peach buds were killed, except on our mountain ranges, and the trees themselves looked dark beneath the bark, and many supposed them killed, and some were actually cut down. But, as spring opened, it was found that only the small branches of less than about the size of one's finger, were actually dead, while the larger branches put out shoots, though late, and grew finely, and a new

layer of wood was deposited beneath the bark, and covered up the dark wood. This dark wood was visible for a number of years after, and after a time began to decay, while the outside wood was sound. This effect is still visible in our old trees, being decayed inside while still bearing fruit. Trees often live here to be thirty years old, and I am not sure that it injured their bearing afterwards, though, by causing the larger branches to be weaker, they were more liable to be broken down when loaded with fruit. We find the Grosse Mignone here our most tender variety.

It was rather remarkable, that the cold was more intense across the middle of this State, this winter, than on its northern border, the thermometers, in some places, indicating 26° below zero, and the ice at Fredericksburg, on the Rappahannock, was said to have been twenty-five inches thick.

In several numbers of the *Horticulturist* lately, there have been articles commending the Lombardy Poplar as an ornamental tree. That it has its peculiarities, which render it particularly desirable in certain situations, none can doubt; but all through this region it has died outright, and I know not of a single thrifty specimen anywhere. What can be the cause of so general a destruction? This might be worth while for arboriculturists to inquire into. One suggestion that has been made is, that as the plant is dicœcious, and as we have had only the staminate variety, and, consequently, no reproduction from seed, this may be the cause of their failure. If this should be the fact, it might be an easy matter to introduce both kinds from their native regions, and again be able to disseminate them.

I have noticed quite a number of plans recommended as specifics against the depredations of insects on young plants, particularly young cucumbers. The best remedy I have ever seen tried is a decoction of Quassia, say one pound to two gallons of water, boiled so as to get its strength, then, with a small sprinkler or watering-pot, wet the plants well all over, by turning up the under side of the leaves, and, if this is carefully done, no insects will injure them; as new leaves push out, or when rains wash the plants, a repetition will be needed. Quassia can be obtained at the wholesale apothecaries, at about sixteen cents per pound, and its bitter principle seems peculiarly distasteful to insects. A desire to benefit my brother horticulturists, is my excuse for so many different subjects in one communication.

May 1, 1856.

## MR. BARRY'S ADDRESS,

### AT THE FRUIT GROWERS' ASSOCIATION, BURLINGTON, IOWA,

CONTAINS the following remarks, so valuable in themselves, that we have thought it a duty to preserve them here:—

"Let us look at the list of our best foreign pears. The Bartlett is supposed to be English, originated in 1760, and it is certainly the best variety ever obtained in that country. Gunsell's Bergamot is the next best, but it is uncertain, and a poor tree while young. Dunmore, one of Knight's, stands next—a large, fine fruit, but too uncertain. These, then, are about all the English varieties admissible to our list of select sorts. White Doyenné and Brown Beurré are old French sorts, supposed to date back almost to the days of the Roman Empire.

"The Louise Bonne de Jersey originated as a chance seedling, at Longueval, in France, in 1788—originally 'Bonne de Longueval.'

"The Flemish Beauty, originally called 'Davy,' originated by chance in a Flemish village called Deftinge.

"The Duchess d'Angouleme sprung up by accident, in a garden, in 1800. It

bore in 1819, and, the year before, the gardener had ordered it cut down, and only changed his mind after it had received several blows with the axe. The Urbaniste was raised by the Comte Coloma, in 1783.

"Beurré Diel was found on a farm, near Brussels. Doyenné Boussock is an old Belgian sort, called 'Double Philippe,' 'Beurré de Merode,' etc., origin not known.

"Belle Lucrative was one of Esperin's seedlings, one of the first and best; he called it Seigneur, the French renamed it. His method was, I believe, to sow the seeds of good pears.

"Beurré Capiamont was raised at Mons, in 1787.

"Winter Nelis, at Malines, some seventy or eighty years ago, and called Bonne de Maline; Van Mons Leon le Clere, was raised from the seed by Leon le Clere; the seeds sown were said to be Easter Beurré, Beurré d'Aremberg, and St. Germain.

"Beurré d'Aremberg was a chance seedling, at Enghein.

"Easter Beurré, known as Pastorale, Bergamotte de la Pentacole, Doyenné d'Hiver, etc., was found at Lourain, in an old garden of the Capucins—the original tree was standing in 1825.

"Glout Morceau, by M. Hardenpont, in 1789, and called to this day 'Beurré Hardenpont.' Napoleon, at Mons, in 1808. Beurré Superfin, by Goubault; Beurré Clairgeau, by a man named Clairgeau, at Nantes, in 1850 or 1851; so we might proceed with Beurré Giffard, B. Goubault, Beurré Gris de Hiver, B. Langelier, Triomphe de Jodoigne, Jalousie Fontenay Vardee, Epine Dumas, Rostizier, Vicar of Winkefield, and, indeed, all the leading foreign varieties in our catalogues. B. Bosc, Beurré d'Anjou, and Doyenné d'Ete, are said to be seedlings of Van Mons, but the facts concerning their origin are not very clear; so that, although the world is greatly indebted to Van Mons for his devotion, through long years, to what he regarded as the regeneration of fruits, upon philosophical principles, yet his seedlings, so far, have not yielded any great treasure. The Belle Lucrative, of Esperin, is perhaps the finest pear, all in all, produced in the last century. Esperin, in it, left a noble monument to his memory, and his seedlings have produced many other fine fruits. At his death, he placed them in the hands of his friend, Mr. Berckmans, who has them now planted in New Jersey, and we are in hopes to hear from them in a few years.

"Knight's attempted improvement in England, by *hybridization*, but produced only a few good fruits. His pears, with the exception of Dunmore, which I have already mentioned, are of no value in this country. He gained the Black Eagle, Elton, and a few other good cherries. Dr. Brincklé, of Philadelphia, has attempted the same thing in this country, and has already a large number of very promising seedlings in the hands of Mr. Berckmans, for trial. They are all grafted in strong stocks, and will soon bear.

"The learned doctor has great faith in this method. He believes it to be as certain to raise a good new fruit by crossing two good ones, as it is to raise a good animal on the same principle. The art of hybridization of fruits, however, is a very nice one, and requires time, labor, and precaution, that few people can or will undertake and execute with accuracy.

"In this country, as in Europe, our new fruits have either sprung up by accident, or have been produced from the sowing of the seeds of good varieties. Thus we obtained nearly all our peaches, all our hardy grapes, most of our best plums and apples. Of pears we have already a noble list; all of them either picked up wild in hedges, or from the seeds of good pears.

"The whole of Europe has not produced a pear so fine as the Seckel, nor one which succeeds over a wider territory; and then we have the Brandywine,

Tyson, Sheldon, Howell, Lawrence, Onondaga, and many others nearly as good as these. There are, at this moment, many thousands of seedlings from our best fruits on trial, and we may reasonably anticipate some important acquisitions. Indeed, I believe that before the end of the present century, our best pears, as well as our apples, will be those originated on our own soil. The facts which I have stated concerning the origin of our best fruits, both native and foreign, hold out great encouragement for the prosecution of this work. My advice to you, here in the West, is to sow every good seed you can get. I mean the seeds of those fruits which succeed best here. When your seedlings have made one season's growth, you can bud or graft the most promising on strong stocks or bearing trees, and test them in three or four years.

"For several years we have been sowing in this way, and if we get one good one in five hundred, we shall feel satisfied; we may get twenty. The interest and excitement which the work awakens, is no mean recompense in itself.

"No other fact connected with fruit culture is more fully substantiated by every day's experience than this, viz: To insure successful cultivation, we must have varieties that are adapted to the peculiarities of our soil and climate. Many of your most valuable apples for this country prove utterly worthless with us, whilst many of our best fruits fail entirely with you. This Society, and others of a similar character, are collecting information on this head, of the highest value.

"The fact is well established, that the fruits which succeed best in particular localities are those which originate there, or in others slightly different. I believe the *Baldwin, Hubbardson's Nonsuch*, and *Porter* apples, are nowhere quite so good as in New England. The *Newtown Pippin, Swaar, Esopus, Spitzenburg*, and *Northern Spy*, are scarcely anywhere so good as in New York. Our northern apples are of little value in the south, and the very finest southern apples are utterly worthless in the north. The reason why those seedling fruits obtained in certain localities are more successful there than elsewhere, cannot be that the climate and soil exercise such an influence upon the seed or the seedling, but because, when the seedlings show fruit, those only are preserved which possess qualities that are desirable there. The R. I. *Greening* would not have been preserved in Georgia, nor the *Rawles Janet* in Massachusetts. The true way to advance in this matter will be for the cultivators of each district to sow the seeds of those varieties which succeed best, or which possess the most important qualities. Every successive generation will be more and more acclimated, and thus, in time, fruits will be obtained capable of resisting all the changes and severities of climate, and peculiarities of soil.

"In the hurry of our first planting, this experimental culture has been neglected, but it is now high time that it should be taken up in earnest. It may be said that our varieties are already numerous enough, and so they are; indeed, we have far too many, but who will say that even the *best* are *good* enough, or that improvement is not necessary or desirable? No, indeed; the work of improvement has scarcely begun.

"The reform which has, within a very few years, been effected in the nomenclature of fruits, is not the least important part of our progress. What a labyrinth of error and confusion the names of fruits were in, some dozen years ago. Not more than seven years ago, full one-half of all the fruits exhibited were incorrectly named, or not named at all. The specimen trees which we collected between 1839 and 1843, were full one-half incorrect, and they were obtained from the most reliable sources then in existence. Of thirty or forty specimen peach-trees from one establishment, scarcely one proved true to name.

"In the course of my business as nurseryman, and during my connection with

horticultural journals, I have often been surprised, of late, at the number of persons who are particular and discriminating.

"One man writes, on reception of some trees he has purchased, such and such a variety has dark shoots—the books say they ought to be light. Another says the habit, or the foliage, or the flowers, of his trees do not answer the description. A third says his strawberries are staminate—they ought to be pistillate; and so on. These are all indications of that spirit of inquiry and observation which is a sure presage of intelligent and successful culture. The time has come when nurserymen must be observing and accurate, or they will lose their business character and customers both. They must plant specimen orchards, test and compare their varieties, read and study, attend exhibitions and meetings, such as this, and by these means acquire such knowledge of their profession as will enable them to prosecute it successfully and honorably. The facilities which dwarf trees now offer for testing a large collection rapidly, on a small plat of ground, and at a moderate expense, leave no excuse whatever for the neglect of this work.

"The cultivation and management of trees in orchards and gardens are improving rapidly, but much yet remains to be done before we attain even mediocrity. The loss which the United States sustain annually in the careless and unskilful planting and management of trees, if accurately summed up, would be almost incredible.

"At the Fruit Growers' Meeting in Western New York, a few days ago, the question was raised: What becomes of all the trees that are propagated and sold in the nurseries of that section?

"The opinion of the meeting, as expressed in the discussion, was, that although many trees were lost and worthless from defective or improper treatment in the nursery, and many from damage sustained in transportation, yet more were lost by unskilful planting, and neglect afterwards, than from any and all other causes combined.

"This I believe to be the case. In all my observations of travel, I think I can safely say that I have not seen one orchard or one garden in a hundred even tolerably managed. By far the greater number look as though the proprietor had abandoned his trees to ruin.

"Blown over to one side, anchored in a tough grass sod, buried up in groves of cornstalks, torn and broken by cattle, barked and bruised with the plough, pruned with an axe—thus they perish in their youth, or become old, deformed, covered with lichens, and a prey to swarms of insects, before they have yielded their first fruits. What folly it is in men to invest their money in trees, and then wilfully ruin them in this way! In Western New York, where cultivation is about as good as in any other section, a man who cultivates his orchard or his garden thoroughly, whose trees are healthy and handsome, making vigorous growth, and yielding fine fruit, is talked of as a rarity—and so he is.

"The specimen trees in the establishment with which I am connected, are but tolerably well managed; the ground is kept clean around them, and is occasionally dressed with manure or compost; so that, in all seasons, we get a fair growth and a fair crop—but amateurs might have theirs vastly better. Yet we are daily asked what we do to our trees? and many seem to think that we have some secret art—some system of 'terra-culture'—with which the world at large is unacquainted.

"We need a complete revolution in these matters. I cannot now detain you to go into the details of planting, and pruning, and mulching; but I beg you who understand these matters, to constitute yourselves missionaries, and preach this doctrine of high cultivation zealously in your respective parishes, and give examples of it in your own grounds, that your practice may correspond with your precept."

## CRITIQUE ON THE JUNE HORTICULTURIST.

*Gentleman Farming.*—Very pleasant to talk about—that is, to those who know nothing at all about farming, either "gentlemanly" or vulgarly. After exhausting "Lorain," read the "Sparrowgrass Papers." I have witnessed sundry editions of gentlemanly farming which didn't last a great while, and ending either in disgust, with a summary throwing-up of the occupation, or toning down into a practical, positive reality, like any other business in which a man proposed to make an honest livelihood.

Wonderful ideas many people have of the profession of farming! A deal of poetry and imagination, into which are intermingled Sylphs and Dryads; Phyllisses and Damons; shepherds' crooks, cottage girls, and country swains; innocent birds, bleating lambs, and various other romantic dreamings. But it is wonderful to find how soon these delectable images of agricultural bliss become spirited away on the trial. If a man have fifty thousand dollars well invested, on which he can draw punctual semi-annual dividends at six or eight per cent., then put himself and family on to a farm, well conditioned in all particulars, and children well-behaved, and not over-extravagant in their notions, and, moreover, a *good ways out of town*, he may, possibly, with a good deal of hard and vexatious labor, bring the year about at "gentleman farming." Otherwise, like the cobbler, he had "better stick to his last."

Why don't we hear of gentleman printers, gentleman merchants, gentleman doctors, gentleman editors, and gentleman everything else in the professional and business pursuits of life? Simply because every profession or calling in the world which amounts to anything, and by which men get their living, is followed in *earnest*, and those who engage in them, lay their whole talents and labors into the work, whatever it be. The great, popular mistake of those who talk of *gentlemanly* farming is, that they suppose the *practical* farmer to be a boor, of necessity, and that his calling is a vulgar one, unfit for an educated mind; yet, when sublimated by intelligence, education, and refined associations, *may* be made respectable! "Gentleman farming" is a rank humbug, as any other profession or trade would be, followed in the same fashion—that is, by hanging out a sign, furnishing the shop, store, office, or other establishment, with its stock in trade, library, or what not, and then leaving the students, clerks, and shop-boys to take care of it, while the principal goes about the streets, talking politics, spending his daylight at the bar-room, sucking down brandy-smashes and mint juleps, or fooling away his time in any other nonsense. That is the "gentleman" way of doing any sort of business, "farming," or otherwise. The upshot of the matter is, a man may be a gentleman in any calling which demands the exercise of brains, ingenuity, and industry. I never yet knew a useful profession which demanded low intellect or clownish manners as a qualification for its pursuit.

*Biota Orientalis, and other items*, pp. 252–255.—I don't know anything about them.

*Carriage-House and Stable for a Small Cottage.*—A capital plan. The floor accommodations cannot be bettered; yet, if the roof were steeper, and, instead of being hipped, gables were run up at each end, the hay-loft would have twice the room in it, and cost no more than the plan now given. Builders of such things should always recollect that half the beauty connected with them is their *utility* for the purposes to which they are designed.

*Flowers, and Botanical Notes.*—"A thing of beauty is a joy forever," said poor young Keats, who would have stayed in this troublesome world to the present day,

could his admirers have had their own short-sighted way about it. A group of wild flowers—and they are always beautiful—in the hands of a laughing, innocent girl—no matter about her age—where a dozen such are rambling over the grass, or among the trees, always draws the sunny side of my heart into their very midst, from the hopeful days of boyhood even to yesterday, when a score of the happy, wayward things made fearful havoc through the tall grass in my lawn, and among my snowballs, honeysuckles, and peonies; it was lucky the tulips were *passé*, for every one would have been beheaded. One-half the every-day charm of woman is, her love of, and attention to, flowers in their season; and all parents, having the opportunity, who neglect to educate their daughters in the knowledge and care of flowers, leave out one of the elements of education, which makes them better children, better wives, better mothers—indeed, better everything belonging to the gentler nature of woman.

*A Few Remarks on Late Grape Crops.*—I like William Chorlton, and his way of growing grapes, and talking about them. A sensible, practical man, with no nonsense about him. Read Chorlton, wherever you find his mark. If you grow grapes, you'll be all the wiser for it; and if you don't, it will interest you.

*Protection to Farms.*—Very well said by Mr. Charles Downing; but, for my part, I prefer a farm where tree protection comes by nature. For those who have pitched their homes on the wide Western prairies, his suggestions are valuable. I could talk somewhat on that subject myself, but Mr. Downing has said quite enough to set ten thousand tree planters at work for the next twenty years.

*The Strawberry Seedling.*—A delightful story. "The *Elder*," Emile may be, but that imagination, so full of simple narrative, poetry, and refinement, can never be "old." The "Clover Hill Seedling!"—a charming name for a new strawberry! A good, Christian man, too, is "Emile the Elder," as his "moral" testifies. What a poor, heartless race of men we should be, in the absence of such gentle spirits to guide us in our daily paths, and restrain us within the exercise of the humanities of life! Let us, most rare "Emile," again hear your genial conversation.

*Michigan Agricultural Society.*—Those annual volumes of *Transactions* which issue from the various State societies of our country, are most gratifying evidences of the advancement of American agriculture. They commenced, long years ago, in Pennsylvania, Massachusetts, and, now and then, in other States; yet, after awhile, from the want of systematic action, gradually died out. In 1842, New York adopted a vigorous, well devised plan of publishing the annual transactions of its agricultural societies, which it still keeps up, to its great advantage; and its example has been followed by sundry other States, until such States as don't do it, have not much celebrity in agricultural spirit and improvement.

Why is it that the newer States, like Ohio, Michigan, Illinois, and, perhaps, another one or two, are so far in advance of some of the older ones in such enterprises? I trust that these "old fogies" are not to be gathered up among the fossil remains of our agricultural enterprise. Their worn and stubborn soils still yield kindly fruits and harvests when properly tilled, and it only needs the active minds of their young farmers to put them *rectus in curia*, as the lawyers say, by the side of their younger brethren.

*Colombian Guano.*—"Eighty per cent. of the phosphate of lime!" Is that so? and "five millions of tons!" Well, that will do—for awhile, at least. "A Philadelphia Company," the owners, too, of all this fertilizing wealth! *What is the stock worth*, Mr. Editor? We must look into this matter, and if it be "true to the card," somebody must make a heap of money out of those odoriferous heaps in question. I think, however, I'll look on and see how the guano works for a year or two, before I invest in it.

JEFFREYS.

## SPRING MOVING.

BY EMILE THE ELDER, PHILADELPHIA.

The bustling commercial people of New York City have established the 1st of May as an annual period for removals among its inhabitants, and we have sometimes taken the liberty to doubt the wisdom or convenience of this fixed periodical exchange of residences. The natural increased demand for carts and furniture-cars, and consequent higher tax upon horseflesh and men, and on the purses of those in competition, furnish no bad argument against a *single* period for all movings, instead of permitting them to occur at any time throughout the year. We can scarcely imagine a good reason in favor of the New York custom, and hence rejoice that the "spring moving" we are about to tell of is of a different description, and where the proper period is fixed by the unerring laws of nature, at the first swelling of spring buds in the month of April.

Our good family doctor, and whom we may be proud to call friend, could not content himself with the mere performance of professional duties; and yet, in a considerable practice, no physician was ever known to labor more arduously and punctually, or more unsparingly of himself. His benevolent heart was not satisfied with curing disease in man, and relieving sufferings through the performance of professional duty; he had the generous ambition to do good to all mankind—to bestow something philanthropically upon his race, and without remuneration, except in the consciousness of being useful. He found hours of leisure in the early morning, which he could devote to plants and trees in his yard, and, with an enthusiastic love of science, his knowledge of botany was readily followed by investigations in pomology and horticulture.

The narrow strip of ground, about sixteen inches wide, that lies beside the division fence between city plots having the usual back buildings, had for many years been the limited field of the doctor's experiments in horticulture, and, more especially, perhaps, in pomology. This little strip of ground, unfortunately, too, had a northern exposure, and yet, 'spite of stinted space and all other difficulties, the "garden" of the doctor presented a rare and extraordinary display of fruit, of various kinds, in season. We cannot be very precise in details, but to convey some idea of this fruit orchard in his town-yard, we inform the reader that it contained one goodly size seedling apple-tree, the seed planted by the doctor fifteen years previously, and for the first fruiting of which he still patiently waits; then there were ten pear-trees, dwarfs and standards, upon which were grafted about seventy-five varieties —many that have already borne fruit, and others as yet only giving promise; one large and thrifty high-bush blackberry, that has produced a great crop of large and beautiful fruit. Six or eight varieties of seedling and fine raspberries, mostly of his own creating, and that have already become celebrated for their high qualities.

Besides these plants in the ground, the yard contained over eighty boxes, filled with living trees or shrubs, grafted young trees and seedlings, to say nothing of smaller pots in great numbers, a Chinese peach-tree, the Salmon Berry, or California Raspberry, &c. &c. All these, forming the basis of numerous experiments, have from year to year accumulated, and now filled the doctor's small premises, almost to the exclusion of a reasonable passage-way through it.

Such was the state of things in the spring of 1856, when the health of members of the family induced a plan of removal to the country—at least, for two or three years—the doctor remaining in the city, devoted as usual to his profession. With this scheme came the necessity of relinquishing the ample city residence, and procuring offices for the doctor; and also came a necessity of providing a new home for the trees, and plants, and boxes. Here was a sad dilemma: one in which the good pomologist was scarcely less concerned for

the well-being and prosperity of his favorite and long-watched trees, than the good man was anxious for the comfort and happiness of his family. The mute but grateful objects of his scientific care, all unconscious of domestic changes in contemplation, were still uninfluenced by the late spring, while the doctor from time to time, among friends, referred sadly to his difficulty of parting with his trees, &c.: he could readily send them to the country, and have them in good care, but then he would be deprived the pleasure of seeing them daily, and of prosecuting his experiments—of patiently watching the fruit buds each spring as they slowly developed, and gave hope of a new variety—a seedling, perchance, that would deserve a name and high rank in the calendar of American pomology. It is but justice to say here, that such would be no new event in the useful life of our medical pomologist, as is testified by his seedling raspberries and strawberries, the "French," the "Cushing," the "Orange," the "Wilder," &c. &c. &c.

Among those whose privilege it is to hear the good practitioner let out the simple wishes of his heart, there was one who early thought to offer the use of his goodly-sized garden for the reception of the favorite trees and plants; the proffer was unexpected, and though very agreeable, was accepted with great hesitation. There was evidently a modest, delicate doubt in the mind of the doctor, as to how he could have free access to the garden of his friends, and, no less, how far it was consistent to accept what he regarded as a rare favor. But these impediments were soon removed, and the proposal was definitely agreed upon long before the proper period had arrived for the "spring moving."

The accepted city yard possessed some advantages of space and exposure over that in which the doctor's nursery had thus far struggled into existence, but with increased dimensions, and a fine southern exposure, there also came drawbacks. A very large locust-tree had long-standing possession of one end of the ground; its far reaching roots, and overshadowing branches, were no friends to the health of fruit-trees, and a considerable grape-vine arbor occupied room at the other end. In their leafless condition, at the period of the friendly arrangement, but little heed or thought was taken of these impediments to an act of intended kindness, certainly not by the owner of the premises, at least, and a delicate sense of propriety would not permit the subject to come from the doctor. But, when the time of tree moving was near at hand, a mutual friend, listening to the design, impulsively exclaimed: "Oh, if that big locust was only out of the way, no spot could be more suitable!" It was not difficult to read in his countenance the sympathetic thought passing through the mind of the doctor, and though little else was said, the question of cutting down the locust-tree at once seriously occupied the thoughts of its owner. And this was no light subject for consideration; the old tree had its peculiar history, and one which deserves to be told here, if the patient reader will permit such an episode.

The city lot, now the scene of our story, had been purchased and built upon, many years before, by a Scotch gentleman—afterward a Unitarian clergyman—who, faithful to cherished associations, planted in his yard a young locust-tree sent him by a friend. When the growth of years had made his tree of goodly size, a severe winter storm came upon it with such unfortunate violence as to separate its forked trunk through the centre, and to the very earth, each half falling in an opposite direction, and making sad havoc with the dividing fences of neighbors. The storm over, our Scotchman sought such aid as was required with strong ropes, to bring the split divisions of the trunk together, and, as in surgery, the edges of the wound being closely in contact, a strong bandage was needed to keep them so; a hoop or band of iron was soon prepared, and, with the blacksmith in lieu of the surgeon, the iron bandage was applied three or four feet above the ground, and the locust-tree was again upright and firm. Thus it prospered for a few years, until the injury to the bark by the iron band, gave symptoms of general disease in the tree; the bandage was in consequence removed, and placed about three feet higher, and again the locust flourished for some years.

But, at a later date, when the old Unitarian clergyman had sold his property, and told the history of his tree with garrulous fondness, again the iron girdle was doing evident mischief: but the story of the tree, beside its beauty, gave it value and interest to the new owner, and with perhaps better mechanical conception, he sought a new remedy for the evil. A straight iron rod, having a head at one end, and a screw upon the other, was now passed horizontally through the centre of each trunk, and, by means of an iron nut on the screw end, the security of the tree was accomplished without injury. The bark in time grew over the ends of the iron rod, and for nineteen years the locust-tree had flourished, at the period of the intended coming of the doctor's fruit-trees and plants. Sympathy with the past, and even with the far-famed ballad of George P. Morris, "Woodman, spare that Tree," came into conflict with the claims of the doctor, with the desire to gratify a valuable and excellent man: it was April, the time for tree moving had arrived, and when the medical pomologist came to make his next friendly visit, the old locust-tree lay in sections upon the grass plat.

It is now scarce a month since this city clearing, and the seedling pears, with their many grafts, the raspberries of different varieties, &c. &c., gratefully occupy the space so long monopolized, if not hallowed, by the Scotch gentleman's gift of friendship. And with early sunrise, may be seen daily from the back windows, the doctor inspecting and enjoying the new nursery, thus renewing the sentiment associated with the first planting there, and certainly no less valuable or interesting to a warm and honest friendship.*

* May 1, 1856.—We cannot resist the desire to give value to our little narrative, by adding an article from the gifted pen of a mutual friend, and which has reference to the same distinguished pomologist. We quote from the columns of the *North American and United States Gazette* of July 20, 1847. So just and eloquent a tribute to merit deserves a more enduring form than that afforded by the passing sheet of a daily newspaper.

*The Love of the Beautiful and Useful.*

There is a class of human beings—its name is legion—who are good and benevolent to an infinite degree, in theory. They would perform wonders if they had the power; but their vast ambition to pursue the ideal beautiful and good, cannot stoop to any of the achievements within their own contracted sphere. Their imaginative benevolence travels over boundless fields of usefulness; they endow, with unearned wealth, hospitals in the air; indulge their vanity in erecting colleges upon vast foundations of imagination; gather fruits that require no culture; rejoice over ores that are not dug from the mines; and are good and great, in their own estimation, upon this aerial principle. These men are loud in their lip-love of all that is good and great; but, because they cannot enjoy the princely advantages required to carry out their magnificent schemes, they do nothing. There are others to whom no opportunity to do good, or cultivate a grace, is lost—who would be useful to their race even in a dungeon, and would discover some beauty upon a barren rock in the ocean. We were impressed with this truth, by becoming casually acquainted with the secret pursuits of one of our most estimable and enlightened citizens, in the fragmentary periods of leisure that fall off from a life of intense and persevering professional labor. His life has been devoted, day and night, to the studies and duties of his science; and no one would dream that Dr. —— had leisure for any thought or purpose beyond it. But who has not leisure that practises economy of time, and learns to relieve one species of labor by another of a different character, all swelling the amount of his tribute of good to the Author of all good? In the midst of a most active life, and in the centre of a crowded city, he has been for years engaged in practical experiments in horticulture, and has succeeded in attaining results that contribute more to the *race* than the best fought battle-field of the age. Of course, it will be supposed that he has a large space of ground for these experiments, and every aid that can further them; but, on the contrary, his garden lot is twenty by twenty feet, on the most fashionable square in Chestnut Street. Within that limited space, and in the midst of a large practice, he has still found time and means to make the most important contributions to the horticulture of the country. By the application of science to the culture of most valuable plants, he has been enabled to add new and rich varieties; to discover and illustrate important laws, and to effect, in the offcast minutes which others fail to improve, results that will make millions more happy, when his career of graceful, modest, and untiring goodness and usefulness shall have been closed.

We dare not refer to him in such a manner that even he may discover the allusion; and we mention the fact with the sole purpose of illustrating the truth, that there is no sphere so crowded that it has not room for a new light, a new grace, a fresh achievement for the good, a novel enjoyment for the lovers of nature. The possessors of thousands of acres might envy, and must admire, the student who, in his 'twenty by twenty lot, finds noble resources of enjoyment, and attains results which add to the comforts and happiness of his race.

## CLIMATOLOGY, NO. 3.

BY A CONSTANT READER.

The summer climate of the United States is remarkable in many respects. The mean temperature of its southern portion exceeds that of the tropical region to the south of it. The Isotheral line, or Isothere (that is, the line of equal summer temperature) of 80°, follows the coast of the Gulf of Mexico and the Atlantic, from the southern point of Texas to that of North Carolina. It then, in latitude 34°, sweeps round to the W. and S. W., bending very gradually to the N., till, in the N. E. part of Texas, it again approaches latitude 34°. It is then bent to the S. by the high table-lands of Texas, crosses the Pecos in latitude 29½, and sweeps to the N. W., till, in the neighborhood of Lake Humboldt, it reaches the parallel of 40°; and is then bent suddenly round by the Sierra Nevada Mountains, and sweeps S. S. E. along the eastern coast of the Californian Peninsula.

The space within the Isothere thus described, includes one of the hottest regions of the globe. Its focus is the district from the head of the Gulf of California to the mouth of the Gila, where the mean summer heat is 90°, while that of the West India Islands is 81½. West of the Sierra Nevada, along the valley of the San Joaquim, is another district of intense summer heat, the mean of the thermometer at Fort Miller in that valley being 85°. This belt of intensely heated country follows the southern line of the coast along the Gulf, and is limited in the interior by the Mexican table-lands, which extend to lat. 30°, and of which the height is six or eight thousand feet, and the mean summer heat is 68°. Within this hot belt the mean heat ranges from 82° to 85°. The influences of this intense heat are modified by the moisture or dryness of the climate.

In the southern part of the Peninsula of Florida, twenty-five inches of rain fall in the three summer months; twenty-two inches fall in the rest of the peninsula; twenty inches in the remaining region east of the Mississippi. Through Eastern Texas the summer rains average twelve inches, gradually lessening to ten and eight inches at the W. and S. W. Three inches fall along the valley of the Rio Grande; one and a half inches on the Gila, and the prolonged point of the belt to the N. W., traverses the rainless desert of Utah.

We have, then, in our southern borders, an extensive range of summer tropical climate, capable, in its eastern portion, of maturing all the *annual* fruits and plants of the hottest regions of the globe; and, wherever it can be irrigated in its western portion, susceptible of the highest fertility; for the Basaltic rocks of that region disintegrate into one of the most genial of soils, which will, at some future day, when science shall direct the industry of its people, rival the ancient fertility of the now desert valleys of Persia and Syria, and "blossom like the rose." It is highly favorable to the future prospects of these sterile regions, that the summer rains on the mountains are copious and frequent; so that, by damming up the ravines and mountain valleys, artificial lakes may be formed for the irrigation of the subjacent districts.

The adaptation of this hot belt to the cultivation of tropical *trees*, is controlled by its winter climate. The Isocheimal line, or Isocheim (the line of mean winter temperature) of 65°, passes through the peninsula in latitude 27°, say 120 miles from the cape. South of that line, it is probable that neither ice nor frost is ever known, and that the Clove-tree, the Pimenta, the Date Palm, the Coffee-tree, and the Cacao, would thrive luxuriantly. The Isocheim of 60° passes across the peninsula at St. Augustine, and enters Texas in latitude 27°. South of that line, the olive, the fig, the orange, and the lemon, would flourish.

The Isocheim of 55° crosses the mouth of the St. Johns, and passes along the northern shore of the Gulf to Matagorda, thence W. and W. N. W. to the mouth of the Gila. South of this line, winter frosts occasionally occur, and cut off the orange-trees of Northern Florida.

The extreme N. W. point of the hot district under survey, has a mean winter heat of 35°; for the Isothere of 83°, and the Isocheim of 35°, nearly touch each other at Lake Humboldt, in Utah. It is only, therefore, in the southeastern part of this district that the cultivation of the intertropical fruit-trees can be successful.

It is true that there may be spots found in the interior protected from the cold winter winds, and from frosts, where the hardier trees of the tropics, especially of the hills and table-lands, such as the cinchonas, may be introduced.

If the winter and summer climates of the district round Humboldt's Lake be thus strongly contrasted, the summer climates of the coast, and of the mountain valleys of California, are equally so. The Isothere of Fort Miller, on the San Joaquim, is 85°, and that of Monterey, 150 miles to the west, is 57°!

The summer mean of the Pacific coast does not vary from 57°, between Monterey and Sitka, a space of 22° of latitude, and near two thousand miles of coast.

This extraordinary fact is no doubt caused by the cold waters of the Pacific Ocean. Although there is no steady superficial polar current to be traced near the shore, it would seem that such a current prevails in the deep sea beyond, and that the cold waters, as they approach the land, are forced upwards by the shelving of the bottom.

There is at all times a belt of cold sea-water, of the temperature of 57° to 60°, along the northwestern coast of America, extending many hundred miles out to sea, which controls the climate of the coast, and almost equalizes the temperature of the four seasons!

A similar but narrow belt of cold water borders the Atlantic coast, inside of the Gulf Stream, which, though it does not influence the summer climate, is distinctly felt in the cool northeast winds which sometimes prevail with a clear sky for weeks during spring and early summer.

The Isothere of 75° passes through the Bermuda Islands in latitude 32°, and strikes our coast in latitude 39½°. It is bent to the S. W., by the Virginia Mountains, to the parallel of 34°, along the northern line of North Carolina and Tennessee. West of the Alleghanies it again bends to the N., and then to the W., crosses the Mississippi in latitude 39°, near the mouth of the Illinois, and continues west to longitude 103°. It is then deflected to the S., by the Rocky Mountains, to latitude 32°, in the valley of the Rio Grande. It then bends again to the N. W., strikes the Great Salt Lake—the Lake Timpinagos of Humboldt—passes W. in latitude 41½°, till it is again bent S. by the cold atmosphere of the Pacific coast, and strikes that coast in latitude 26°.

The Isothere of 70° crosses the Hudson at West Point, touches the parallel of 40° in Western Pennsylvania, passes through Sandusky and Chicago, thence N. W. to Fort Snelling, crosses the Missouri near Fort Union, reaches the parallel of 49°, and is then bent to the E. of S., by the Rocky Mountains, till it reaches latitude 35°, in the valley of the Rio Grande. West of the Rocky Mountains it bends to the north, and reaches the parallel of 47½° in longitude 118°. It then bends suddenly to the south, and strikes the coast in latitude 34°.

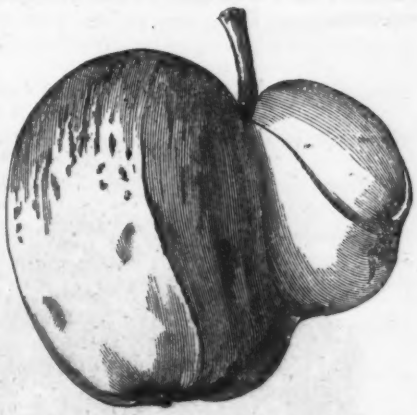
"There is a great identity," says the report, "of the temperatures of this large area, embraced by the Isothermals (*Isotheres*) of 70° and 75° east of the plain, including Iowa, Illinois, Indiana, Ohio, Kentucky, Upper Tennessee, Virginia, Maryland, Delaware, Lower Pennsylvania, and New Jersey, excepting from these some points of coast exposure, and of the mountainous districts, the summer temperatures are more nearly uniform than almost any continental area of like magnitude."

## ON THE UNION OF EMBRYOS.

FROM THE GARDENERS' CHRONICLE.

It will have been seen by a communication in our last number, that experimentalists are puzzled to understand how it is possible to make two embryos grow together by grafting. It seems to be considered impracticable so to unite the seeds of an orange and a lemon as to blend them into one single plant from the very beginning of their growth. Undoubtedly, the operation is attended with some difficulty. Skill, and a sound knowledge of the nature and structure of seeds, are demanded of those who would perform it. For that reason, indeed, it was, that we offered a valuable reward to the first who should succeed. Had it been a mere puzzle, which could be solved by some lucky accident, we should have consigned it to the limbo of rebuses, charades, and similar puerilities. But knowledge and the power of applying it were demanded, and for this reason it appeared to be an excellent subject for experiment; certainly not merely for the sake of a trifacial orange, which might be easily obtained in Alexandria.

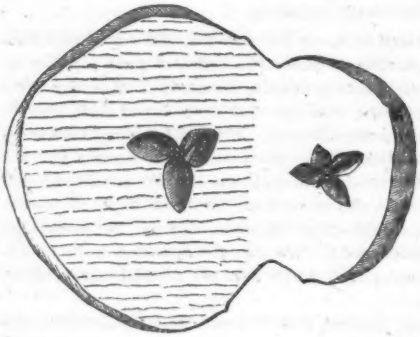
We have already stated, in reply to an inquirer, that it would probably facilitate the operation if the surfaces to be united are pared down, just as is done when common grafts are united. But we are by no means sure that this is indispensable. On the contrary, many facts indicate that mere contact will produce the necessary union. No one can be ignorant that cucumbers often come as twins; so do nectarines; and we have now before us a pair of Coe's Golden Drop Plums completely united for about half their length. In all such cases, no removal of the surface of the parts took place where they joined. They united in consequence of being firmly pressed together when very young, and in the early stage of growth, while the tissues were young, tender, and forming fast.



A similar example is presented by the monstrous apple of which a figure is annexed. In this instance, two apple flowers, accidentally brought into close contact in the earliest state of the bud, being kept firmly in contact as they advanced in growth, ended by becoming half incorporated; notwithstanding which, they finally became a twin fruit, consisting of two very unequal halves. In the smaller only four cells of the seed were formed; in the larger, but three. In other respects the structure was complete; but each was furnished with a pair of elevated lines on the side next the line of junction, as shown in the figure. The nature of these lines is unknown to us. What is particularly deserving of attention here is, that the hairy surface of the young apple flower offered no obstacle to the junction in question; possibly it took place before the hairs had formed.

Such being the case, it becomes a question whether, in grafting seeds, it is at all necessary that the embryos should themselves unite. It may be indeed conceived that the firm, solid, highly carbonized, and scarcely azotized tissue of which such an embryo as that of the orange consists, would, from its very nature, be unlikely to form an adhesion; just, indeed, as

grafters find that old wood is very difficult to operate upon. It is by the young tissue, when first growing, soft, tender, succulent, and rich in azotized matter, that junctions are effected. Is it not, then, highly probable, that if embryos are to be grafted on each other, the union must take place between the surfaces of the young radicle and the tender lengthening stem when first born? We think so. And upon that supposition, it may be a question whether the operation now under discussion may not be most easily and certainly performed by allowing the embryos to enter upon the early stage of germination before they are finally tied together.



Suppose a couple of orange pips were allowed to grow just long enough to be handled, and then had, in each case, one of the cotyledons removed, so that the nascent stems could be secured to each other with collodion, or a film of India-rubber, or some such elastic matter. We only throw this out as a suggestion.

# EDITORS TABLE.

☞ Exchanges.—Those periodicals with which we exchange, as well as letters for the Editor, should be directed to the *Horticulturist*, Germantown, Pa.

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National Agricultural Society.—The following are the premiums for fruit and wines, to be awarded at the National Exhibition of the United States Agricultural Society, to be held in Philadelphia the 7th, 8th, 9th, 10th, and 11th of October next. The whole of the premiums amount to fourteen thousand dollars. We shall have a show which will attract a larger audience than any heretofore held in our consolidated city :—

Class VII. Fruits.—All fruits must be arranged on the tables by 9 o'clock, of Tuesday morning.

All fruits offered in competition must be grown by the competitor.

Fruits receiving a premium in one class cannot compete in another.

Judges may withhold premiums when fruits of sufficient merit are not presented.

Fruits once placed on the tables are under the control of the judges, and cannot be removed until the close of the Exhibition.

Exhibitors must present to the Secretary a list of the fruit exhibited, with the names of the fruit, and a certificate, when required, *that the same was grown by the exhibitor.*

Apples.—For the largest and best exhibition of named varieties, not less than three specimens of each, $50 ; for the second best, $30 ; for the third best, $20.

For the best thirty varieties, not less than six specimens each, $30 ; for the second best, $20 ; for the third best, $10.

For the best twelve varieties, not less than six specimens each, $15 ; for the second best, $10 ; for the third best, $5.

For the best dish of apples, of one variety, $5 ; for the second best, $4 ; for the third best, $3 ; for the fourth best, $2.

Pears.—For the largest and best exhibition of named varieties, not less than three specimens of each, $50 ; for the second best, $30 ; for the third best, $20.

For the best thirty varieties, of six specimens each, $30 ; for the second best, $20 ; for the third best, $15.

For the best twelve varieties, six specimens each, $15 ; for the second best, $10 ; for the third, $5.

For the best dish of pears, of one variety, $5 ; for the second best, $4 ; for the third best, $3 ; for the fourth best, $2.

Peaches.—For the best collection of peaches, $15 ; for the second best, $10 ; for the third best, $5.

For the best dish, not less than twelve specimens of one variety, $5 ; for the second best, $3.

Quinces.—For the best bushel, $5 ; for the second best, $3.

Grapes.—For the best native or seedling grape, hardy, and equal or superior to the Isabella, a premium of $20 ; second best, $10.

For the best display of Isabella grapes, not less than twelve bunches, $10 ; for the second best, $5.

For the best display of Catawba grapes, not less than twelve bunches, $10; for the second best, $5.

For the best display of native grapes, $15; for the second best, $10.

For the best display of foreign grapes, $15; for the second best, $10.

Special premiums will be awarded on melons, plums, and other fruits not enumerated, if creditable specimens are presented.

Class VIII. Native Wines.—For the best dry Catawba, 1855, $10; for the second best do., 1855, $5.

For the best dry Catawba (older), $10; for the second best do., do., $5.

For the best wine from the Herbemont Grape, $10; for the second best from do., $5.

For the best wine from the Schuylkill or Cape, $10; for the second best from do., $5.

For the best wine from Isabella Grape, $10; for the second best from do., $5.

For the best wine from any other grape, $10; for the second best from do., $5.

For the best sparkling Catawba wine, $10; for the second best do., $5.

For the best sparkling wine from any other grape, $10; for the second best do., from do., $5.

With Mr. Wilder to carry out the grand programme of this National Exhibition, no one doubts of eminent success.

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Gossip.—Pyramus, a resident of Babylon, became enamored of Thisbe. Their parents forbade marriage, but the lovers interchanged sentiments through the aperture of a wall. They agreed to meet at a given time at the tomb of Ninus, which was overshadowed by a mulberry-tree. Thisbe, first to come, was frightened by a lioness; as she fled, she dropped her veil, which the lioness left covered with blood. The lover soon arrived, and seeing Thisbe's bloody veil, concluded she had been torn to pieces by wild beasts, and instantly stabbed himself. When Thisbe returned, and saw the dying Pyramus, she, too, fell upon the sword, and the mulberry-tree was stained with the blood of the lovers, and ever afterwards bore fruit of that color. Think of it, when you eat mulberries!—The leaves of the olive-tree are not green; they resemble those of a hedge covered with dust. "I am like a *green* olive-tree in the house of God," should be translated *vigorous*. It is, notwithstanding, a lovely tree in an arid climate, and a favorite haunt for singing birds, having a thin shade, sufficient to shelter them from excessive heat, yet not excluding much light. The leaves resemble somewhat those of a willow, and the plant is classed among evergreens.—The superstitious ceremonies and histories belonging to some vegetables, have been not less surprising than ludicrous; the Druids are said to have cropped the mistletoe with a golden sickle, and the bryony was said to utter a scream when its root was drawn from the ground; the animal that drew became diseased, and died; on which account, when it was wanted for medicine, it was usual to loosen and remove the earth, and then, to tie it by a cord to a dog's tail, who was whipped to pull it up, and was then supposed to suffer for the impiety of the action. More recently, bits of the dried root of bryony were rubbed smooth, and strung, and sold under the name of anodyne necklaces, to facilitate the growth of children's teeth; we have met lately with people of education who believed and practised carrying a horse-chestnut in each coat-tail pocket, as a remedial agent!—In Gerarde's *Herball*, printed in 1633, he says: "Wine made of the juice of pears, being taken in small quantities, comforteth and warmeth the stomach, and causeth good digestion." Of a certain Parson Bodnome's apples, is this quaint remark: "The hogs are fed with the fallings of them, which are so many, that they make choice of those apples that they do eat, who will not taste of any but the best. An example, doubtless, to be followed of gentlemen who have lands and livings."—One of the processes employed by the Chinese and Japanese for dwarfing their little, stunted, specimen trees, is, as soon as they have germinated, to smear them with fluid honey, or dissolved sugar; they keep them in a little box, with a small glass for light, and intro-

duce a nest of ants, whose eggs soon hatch and produce an active colony, greedy of sugar, and incessantly running over the plants. The everlasting play of these insects keeps up a peculiar excitement, which ends by producing the state of dwarfness so much admired by the fashion of that part of the world. They will sometimes show you a fir-tree, in perfect health, three inches high. After the late Chinese war, some *magnificently* small trees were sent as a present to Queen Victoria; Sir Wm. Hooker examined them, and found their roots shackled in every conceivable way with wires, to *promote* their dwarf habit.—One of the great errors in keeping parlor plants is, to assemble too great a variety. A few kinds bear the heat of a living room very well; one plant, well tended, and in fine health, will afford more pleasure than twenty half-nurtured; we are induced to the remark, by having lately seen a Catalonia jasmine covering a large space, and running over the inside of a window. Mr. Kilvington, of this city, unites a number of elegant climbers in one pot, and, when in fine health and vigor, nothing can be more beautiful. But there can be no such thing as floral health without fresh air, and enough of it.—It is often asked, what plants will best protect a loose or sliding bank of earth, such as is made by a deep cut of a railroad? The Silver Poplar for trees, and the Osage Orange, and the Sea Buckthorn, for shrubs, and the Lucerne and the Arundo arenaria among grasses, are the best available. The roots of the Lucerne grow three feet in a season, and form a very strong mat of fibres. It will continue, in a good soil, about fifteen years.—Two of the great errors of American gardens will be found to be the following: The walks are not kept *full* of gravel, which gives them a harsh and depressed look. Secondly, the flower beds are not kept *covered* with foliage; they thus expose unsightly patches of soil, which dries and bakes in the sun; verbenas, by regular pegging down their shoots, cover the ground thoroughly, with proper care.—A correspondent calls our attention to the circumstance, that when writing of the Persimmon, we omitted to mention the efforts made in France to improve this American wilding. M. Audibert produced, some years ago, a seedling with large, round fruit, as large as a hen's egg, of a golden yellow color, and an agreeable flavor. Vague rumors have reached us that this new variety has been introduced in one of the Southern States. If so, we should be glad to hear more of it.—Old John Evelyn, in his "Philosophical Discourse of Earth, &c.," printed in 1676, says: "Fruit-trees do generally thrive with the soil of neats and hogs; most flowers with that of sheep, but especially roots. Peter Hondius tells us, that by the sole application of sheep's dung, he produced a raddish-root as big as half a man's middle, which, being hung up for some time in a butcher's shop, people took it for a hog."—What plant is this, described by the same quaint old writer? "Some vast timber-trees have little or no mould adhering to their roots; such is that beautiful stranger, the Japan Lily, called by those of Gurnsey, *la belle de nuit;* and a certain Palm of the same Japan, which shrinks and dries at the least touch of water, as if it were laid before the fire, which is, it seems, the only remedy that restores it, or the sudden replanting it in scales of iron, or the most burning sand."—To convert cheap cotton stuff to a substance for sheltering or forcing plants, after the cloth is stretched to its place, *paint* it with a mixture of three pints of best boiled linseed oil, four ounces of white resin, and one ounce of sugar of lead; the oil and resin must be a little heated to mix them, and the sugar of lead must be first ground with a little of the oil, and then mixed with the remainder. Thus treated, the cotton becomes semi-lucent, retentive of heat, and is not one-fifth the cost of glass.—Extraordinary accounts of the effects of electricity on vegetation were circulated ten or twelve years ago, but careful experiments have not proved its utility; those experiments were detailed in the *Journal of the London Horticultural Society*, and were copied into the *Horticulturist*, vol. i. page 524, but nothing since has been proved to give the subject importance.—Willis, in his amusing "Letters from under a Bridge," speaking of the selection of a site to make a paradise in the country, remarks: "I am supposing you want a patch of the globe's surface to yourself, and room enough to scream, let

off champagne corks, or throw stones, without disturbance to your neighbor." "But," he goes on to say, "this desire for seclusion has led some further into the wilderness than necessary, two or three miles being quite far enough to send your horse to be shod, or to send for doctor or washerwoman, and half the distance would be better, if there was no prospect of the extension of the village limits. But the common diameter of idle boy's rambles is a mile out of the village, and to be beyond that is very necessary, if you care for plums or apples." There is philosophy and common sense in this and much of those letters.—By way of London! we learn that the Mormons have founded a Horticultural Society, W. Woodruff, President; the first meeting was opened with prayer; peaches were the only objects of exhibition, by two ladies, whose husbands were absent preaching their gospel; we are told, "the whole appearance of the stand was sufficient to excite the epicurean taste of the most refined, and was a feast never before equalled in these vast mountain regions. The people seem very ignorant of horticulture.—Is it not a curious circumstance, that we rarely or never hear even the name of the greatest living botanist in Europe? It is Robert Brown, a retiring gentleman, residing in London. "Humboldt," said Sir R. H. Inglis, at a meeting of the British Association, "described him as *le premier botaniste de l'Europe*, accurate, sagacious, and profound, and whose knowledge is only equalled by his modesty. May I add," he continued, "the expression of every one's wish that he would deposit more of his knowledge in print?" Mr. Brown, when a young man, accompanied Captain Flinders in his voyage to New South Wales, and, on his return, published an account of the botany of that region. Sir Joseph Banks, seeing his extraordinary aptitude for science, made him his librarian and curator of his botanical collection, which is now in the British Museum; he left him a house to live in, but nothing to keep it, and he has enjoyed since a moderate income from the Museum, where he has a light employment, and must be now more than eighty years old. A greater authority in botany than Humboldt, De Candolle, said of him: *Facile princeps Botanicorum*.—A French physician has lately propounded a theory on the effect of color on health. Observations for many years show that workers who occupied rooms thoroughly lighted and ventilated, were more healthy than those in rooms lighted with small windows, and from one side only. In two adjoining rooms, equally well ventilated, one set of workmen were healthy and cheerful, and the other melancholy, and often unable to work. The cheerful workers were in a room wholly whitewashed, and the melancholy men occupied a room colored with yellow ochre, which on being well whitened, the men recovered, and were cheerful and healthy. It was found in extensive practice, that whenever occupiers of yellow or buff-colored rooms could be induced to whitewash them, a corresponding improvement in health and spirits resulted. This is most important for schools, asylums, and hospitals, as well as manufacturers' rooms.—The French Exposition, last year, was visited by four million and a half of people; the Great Exhibition in London, in 1851, numbered over six millions; 40,000 English visited the French, but only 27,000 came to London from France. —The eccentric Lord Holland used to give his horses a weekly concert in a covered gallery, specially erected for the purpose. He maintained that it cheered their hearts, and improved their temper, and an eye-witness says that they seemed to be greatly delighted therewith. —George Don, the editor of Don's Miller's *Gardeners' Dictionary*, a work of celebrity and usefulness, died in February last, at the age of fifty-eight; he was the last of a well-known family of botanists. He travelled as collector of the London Horticultural Society, in Brazil, the West Indies, and Sierra Leone, and added largely to their collections.—Petunias, so peculiarly adapted to our warm and dry climate, improve little less rapidly than the verbena; striped and mottled varieties are not now very uncommon. The English advertise a new Double White. The following is from a London paper: "PETUNIA IMPERIAL. Two plants of this novelty in the petunia way, have been in flower for the last three weeks. The blooms measure considerably over two inches across, and are quite as double as those of any first-

rate carnation. It is very sweet, the scent resembling that of a rich stock. It will prove a great acquisition for bouquet making, and room decoration, vases, &c. The habit in pots is dwarf and good, flowering early, and it has every appearance of continuing in blossom for a length of time."—Mr. Fortune, the introducer of Weigela rosea, Dicentra spectabilis, and so many of our other valuable new plants, is still collecting in China.—Our transatlantic friends are not often found guilty of honoring our cultivators or celebrities and their productions, by naming them accordingly. In a French catalogue, however, we find amongst the new roses, "Madame Knorr," "Capitaine Ingraam," and "Frederic Soulie."—The new Japan Lettuce seems likely to be a favorite. The heat of summer has little effect on its hard, compact heads, when even the Drum-Head "runs" to seed.

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ANSWERS TO CORRESPONDENTS.—LOIS-WEEDON CULTURE.—I see in the agricultural papers from abroad, frequent notices of the success of the "Lois-Weedon" mode of culture. Can you oblige your readers with a brief account of it? W. P. S.

The Lois-Weedon plan consists in thorough drainage, deep culture, and the aeration of the soil and crops; to which is added, in practice, the absence of much or any manure, which is procured from that "second farm" which lies below the old cultivated ground. They are beginning to promulgate the doctrine that thorough stirring of the soil, on old Jethro Tull's plan, admits so much ammonia, that other fertilizers may, in many soils, be almost entirely dispensed with. An old farmer, named Moore, was so convinced of having solved the golden problem of steam ploughing, that he sold his farm horses!

The whole story of cultivation may be condensed into a few words, thus: The roots of delicate plants will not travel through earth that has never *seen daylight*. Dr. Clark once said: "The frost is God's plough, which he drives through every inch of ground," pulverizing and fructifying all.

(CALLA.) Thanks; appreciation is reward; we have no other aim or compensation, and, of course, her beautiful thoughts are deeply impressed. If we were obliged to choose, preference would be given to young ladies like her for critics, even over her favorite "Jeffreys." We are sorry to inform her, "Jeffreys" *is engaged!*

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PHILADELPHIA, June 13, 1856.

DEAR SIR: The silver maples which line our streets in different parts of the city, have been, for two years past, nearly destroyed by caterpillars. These trees have been much recommended for their beauty and rapid growth, and, at the same time, said to be free from attacks of insects. You would confer a favor on many of your friends, if you would give us some light as to the manner of preserving these trees, in the *Horticulturist*.

Respectfully, yours, P. S. P.

The idea that there is any tree free from the attacks of some kind of insect or another, is a pleasant fiction. In this respect, every tree has its natural enemy, not excepting even the notorious ailanthus. When these trees are in their native localities, the abundance of them, and of their protectors, the birds, keeps the "enemy" from making much show. When cultivated, circumstances are just reversed, till, year by year, insects so increase, that we first observe, then wonder where they come from. In the towns, we must take the places of the birds. In the case of the maple, this can very readily be done. The caterpillars you speak of are the larvæ of the dropworm. They hang like tassels on the trees before the leaves expand. A half hour to each tree, with a pole and pruning shears, would rid you of your share; but they will come from your neighbors! Induce them, if possible, to go and do likewise. If they be too negligent, use your influence with the City Councils to make them. No man should be subjected to a nuisance, by the neglect of his neighbor.

The New York State Agricultural College is attracting general attention. The charter obtained, a location becomes a matter of great importance. The citizens of the counties of Seneca, Cayuga, and Tompkins, have had a meeting, and designated Sheldrake Point as a desirable location.

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New Test for the Strawberry.—At a late meeting of Strawberry tasters, amateurs, a decision as to the best variety not having been agreed upon, it was proposed to leave the question to the birds. A careful watch was set, and it was discovered the rogues gave a preference to Burr's New Pine, and we are not sure but they have good reasons for their preference.

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Roses and Hail-Storms.—A friend near Chicago writes us thus: "Really, I have never seen such a show of roses, in Illinois, as there is this year. My bushes were nearly, if not quite, covered with snow during all the severity of the winter, and were very little killed; in fact, the shortening-in that they received from the frost seems to have caused an excess of flower buds to put forth. I was afraid the hail-storm of the 6th of June would have done much damage, but the strength of the storm was over and near the lake. I have never seen such large hail-stones as fell in the city; I saw them an inch and a half in diameter—larger than in the Southern Ocean, when we used to say that a volcano had broken out in an iceberg!"

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Fruits of the Crimea.—New apples, of extraordinary excellence, have been discovered in the Crimea, which will, no doubt, find their way to Europe and America. Pallas speaks of one called Sinap Alma, which keeps till July, and only acquires its excellence before the new year. Wagon loads are annually sent to Moscow, and even St. Petersburg. There is also an autumn apple, thought to be far the best ever tasted in any country. A larger cobnut than heretofore known, is also recorded. Twenty-four varieties of grapes are cultivated, either for wine or the table. None of them appear to be of importance.—*Edinburgh Philosophical Journal.*

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Wire Fencing, Again.—James E. Butts, Jr. & Co., of Boston, have been much encouraged by the demand for their woven wire fencing; it is obtaining an extensive popularity. A pamphlet of their publication has reached us, containing descriptions and prices, which may be had on application to the above address. It contains many strong arguments in favor of wire.

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The Calendar.—We could more frequently refer to the value of the Calendar of Operations than we do, to express our high estimation of its value, but it is so evidently appreciated, that this is unnecessary. It occupies so much of a limited space, that in all probability, it cannot be repeated in our columns, at least so much in extenso. Thus the volume of 1856 will be one of reference, and the numbers should be, as they probably are, generally carefully preserved. We know of no more valuable instruction in the same space.

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Ohio Fair.—The seventh annual fair of the Ohio State Board of Agriculture, comes off at Cleveland on the 23d, 24th, 25th, and 26th of September next, and is open to competition from other States. The premium list is excellent and liberal, and the arrangements making, show that the committee are in earnest, and know what they are about. It would give us great pleasure to be present.

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*Meehan's Catalogue* of tree and shrub seeds, this season, fills a large sheet. It includes a great many seeds that have been long sought in vain by purchasers, such as the Buffalo

berry, Virgilia lutea, Cryptomeria Japonica, Prinos glabra, Wistaria frutescens, Fraxinus quadrangulata, Halesia diptera, &c. &c. A stamp inclosed and directed to Mr. M., Germantown, Penn., will procure it, and any of the articles may be ordered in twenty-five cent papers. Such collectors are public benefactors.

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The New Seedling Roses of Mr. James Pentland, Baltimore, are now added to our collection, by the kindness of the proprietor. We shall report on them when they bloom.

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*Coach-Makers' Magazine.*—It was news to us, as it may be to many of our readers, to learn that there was a publication devoted to coach-making, and a capital periodical of its kind it is, coming within the scope of notice in a work devoted to rural art. The *Coach-Makers' Illustrated Magazine* is published at New York, by C. W. Saladee, at three dollars per annum; it is a quarto, profusely illustrated, and doubtless a very useful publication. There is also another, issued in Ohio. What next?

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Seeds from California.—We are greatly indebted to B. B. Redding & Co., of the *State Journal*, Sacramento, California, for a package of seeds of value. Among them is one of the greatest vegetable curiosities, called the Sing, or Vegetable Chestnut, sold by almost every Chinese vender of edibles in California, and brought from China in a cooked state. It resembles the horns of a bull.

Trapa bicornis.

The editors say that they have found but one place where these odd nuts are sold uncooked, and these are so damaged by age and mould, that there is no possibility of making them grow.

The plant producing this nut is well known to botanists. It is the Chinese *Trapa bicornis*—the word is abridged from *calcitrapa*, the Latin name of a dangerous instrument furnished with four spines, which was formerly used in war to impede the progress of cavalry. Both this and the *T. natans* are aquatics; the nuts are farinaceous, and are esteemed nourishing and pectoral. The skin, with the spines, being removed, there is a white, sweet kernel within, somewhat like a chestnut. The *natans* are sold in the markets of Venice, under the name of Jesuits' nuts. They are also much eaten in Switzerland, and the South of France. Some of the canals at Versailles are covered with the plant. Pliny says that the Thracians made them into bread; and Thunberg states that the seeds of the *T. bicornis* are commonly put into broth in Japan. The plant flourishes in a cistern in the stove, and was fruited in England, in 1815. It is cultivated, by the Chinese, in marshes, and is a favorite article of food, which accounts for its being common in the oriental shops of California.

Accompanying these curious water-chestnuts are specimens of an apparently new walnut, lately discovered in California, in appearance between our native walnut and the Madeira-nut. Mr. Redding brought from a distance suckers from some old stools, and has them growing at Sacramento. We shall pay every attention to our specimens, and endeavor to raise them. The tree is recommended for shade and ornament. Other specimens were sent to the Patent Office, but no leaves or flowers having been received, we are unable to say more of it at present; it does not appear to be described either by Michaux or Nuttall.

SWIFT'S IMPROVED LAWN MOWING MACHINE, on the basis of "Shanks's," we have lately seen at work, and we are free to say that its operation is perfect; it cuts, picks up the grass, and rolls at the same time; the cutting is even, and, after a few weeks, a lawn presents the appearance that it should always do, and soon acquires an even, firm sod.

It is one of the greatest labor-saving machines ever invented, and is getting generally diffused. Address H. N. Swift, Fishkill Landing, Dutchess County, New York.

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AUNT CHARLOTTE'S SEEDLING STRAWBERRY is in request, one correspondent having actually sent the large sum of ten cents! for some seeds! We do hope some of our readers suppose there are disinterested articles which are not disguised puffs, occasionally, at least, in the *Horticulturist*. The story was not written to sell the plant—quite the contrary, for the excellent penman and amiable gentleman who wrote that article, is too happy whenever he can gratify a friend; he was amused, however, with the remittance, which is expended in stamps, to tell the writer as much!

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PARKS FOR PHILADELPHIA.—Will it be believed, by future generations, that twelve years have elapsed since the great city of Philadelphia purchased ground for a park, and that, up to this day, the site is a desert? We possess about fifty acres in Lemon Hill, above the Water-Works, a site of great beauty, once the abode of wealth and taste, but now a lager-beer and ice-house *waste!* A pamphlet, on our table, appeals ably and forcibly to the Councilmen to improve it *now*. Shall another twelve years elapse before these politicians obey the wishes of their constituents? We fear it, and we fear that thrice twelve years will go by with a like result. The tax payer who contributes $100 a year to the public funds, need pay in addition but six cents per annum, to keep Lemon Hill as a beautiful public park, and yet we have waited twelve years for a beginning to be made, and, meantime, it grows yearly more hopeless by the destruction of its former beauty and its trees! *Alas!* how penny-wise and pound-foolish is most of our legislation.

Hunting Park Course, a level spot of forty-five acres, presented by a few patriotic gentlemen to the city of Philadelphia, seems to be under better auspices, and is, we understand, soon to be improved.

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THE PORTUGUESE VINEYARDS.—In the late circular of Mr. Forrester, the great wine manufacturer, he gives a most gloomy picture of the Portuguese vineyards. So great is the falling off of the produce, that fabulous prices are demanded, and it now appears that the great proprietors have planted Indian corn to supersede the vine, and, moreover, that a new disease, caused by an insect, has made its appearance, and threatens the vines of Portugal with the fate of those in Madeira and Teneriffe. The indications are strong that Europe must ultimately receive her supplies of wine from America, or elsewhere.

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THE VINEGAR PLANT.—The editor of the *Rural Intelligencer* gives his own treatment of the vinegar plant thus:—

"We spoke last April of a vinegar plant given us by a lady. We took it home, procured at an apothecary's store one of his largest glass jars, holding some two gallons, filled it with common sweetened water committed the plant to it, and there it has been ever since, spreading its folds upon the surface, till it was evident the vinegar had become strong enough almost for the death of the plant; whereupon, this week, we removed the original sweetened water, and supplied its place with new, for the plant to work upon. On drawing off the vinegar, it was found very strong indeed—almost as strong as lye, and, for ordinary table purposes, it will require to be diluted with fresh water. There is no mistake about it—this vinegar plant will keep our family in the purest vinegar as long as we shall need such an article."

[Our own experiments with the vinegar plant have also been entirely successful.—ED.]

FRUIT IN THE WEST.—The dreadful effect of the last awful winter on the fruits of the West, is recorded in the following articles. We place them on record for the information of our readers, and for future reference.

FRUIT IN WISCONSIN.—J. C. Brayton, the horticultural editor of the *Wisconsin Farmer*, writes to the *Ohio Farmer* from Aztalan Nurseries, Wisconsin, May 28:—

"The following varieties of the cherry and other fruits, have endured the cold of the past winter, nearly in the order in which the names of the several species are written:—

"*Cherries.*—Early Purple, Guigne, Cleveland Bigarreau, Florence, Elton, Downer's late Red, Gov. Wood, Holland Bigarreau. Next to these, Knight's Early Black, and Black Tartarian. All others are killed down, of the Heart and Bigarreau classes.

"*Plums.*—Nearly all killed down; White and Red Magnum Bonums, and Smith's Orleans, form the exceptions.

"*Pears.*—Onondaga, Flemish Beauty, Virgalieu, Oswego Beurré, Stevens' Genesee, Doyenné d'Ete, Duchess d'Angouleme, Sisson, and Seckel. Nearly all others killed.

"*Apples.*—Those that were uninjured are: Early Pennock, Fall Stripe, Autumn Swaar, Fall Wine Sap, Fameuse, or Snow Apple, Fulton Strawberry, Fall Orange, Sweet June, Vance's Harvest, Sops of Wine, Lowell, or Tallow, Red Gilliflower, Rosseau, St. Lawrence, Sweet Pear, Utter's Large, Belleflower Yellow, Baily Sweet, Blue Pearmain, Black Vandevere, English Russet, Perry Russet, Red Spitzenburgh, Rawle's Jennet, Herefordshire Pearmain, Talman's Sweet, White Winter Pearmain, Westfield Seek-no-further, Wine-sap."

FRUIT IN ILLINOIS.—E. S. Cooper, of Henderson, Illinois, writes thus to the *Knoxville Journal*:—

"The severe effects of the cold of last winter upon fruit and other trees, are without a parallel in the history of this country. During the most intense cold, the mercury sank to about thirty degrees below the zero of Fahrenheit.

"The more tender varieties of fruits, as peach, nectarine, and apricot, are generally killed to the ground.

"Even some of the young shoots of the hickory, butternut, and some other indigenous forest-trees, have suffered to a considerable extent.

"Quinces are generally killed. The more hardy varieties of fruit, as apple and pear, have suffered far less on high, rolling land, than the same kinds on level soil.

"Young trees from Eastern nurseries have fared as well, or even better, than those reared from seed in our vicinity. Dwarf apple and pear-trees have almost entirely escaped.

"In an orchard of over four hundred dwarf pear-trees, including almost every variety recommended by Downing, I have not had more than three or four killed, and these were all the Summer Franc-Real. I only lost one dwarf apple, and it was on a wet piece of land. The Yellow Belleflower, Lady Apple, Fameuse, and Herefordshire Pearmain, appear to have entirely escaped in every locality.

"The following varieties of apples have not been seriously injured, except on lands decidedly wet, viz: American Summer Pearmain, Red Astrachan, Benoni, Prince's Harvest, Early Strawberry, Golden Sweeting, Keswick Codlin, Autumn Strawberry, Cooper, Duchess of Oldenburg, Fleiner, Hawley, Lowell, Maiden Blush, St. Lawrence, Baily Sweet, Yellow Belleflower, Belmont, Danvers' Winter Sweet, Hubbardston, None-Such, Lady Apple, Lady's Sweet, Mother, Newtown Pippin, Golden Russet, Spitzenburgh, Talman's Sweeting, Wagoner, Cole's Quince, Genesee Chief, Scarlet Pearmain, and Well's Sweeting.

"The following varieties have been severely injured, and in many cases killed outright, viz: Large Sweet Bough, Summer Rose, Fall Pippin, Holland Pippin, William's Favorite, Drap d'Or, Gravenstein, Hawthornden, Jersey Sweets, Porter, Pumpkin, Sweet, Baldwin, Bourassa, Norton's Melon, Northern Spy, Rawl's Janet, Beauty of Kent, Winter Swaar, Summer Queen, and Mylum.

"The following varieties of pears have generally escaped, viz: Bloodgood, Beurré Giffard, Doyenné d'Eté, Osborne's Summer, Tyson, Buffum, Beurré d'Amalis, Beurré Goubault, Beurré Golden of Bilboa, Bergamot, Crassanne, Belle Lucrative, Dix, Doyenné White, Doyenné Gray, Forelle, Fulton, Louise Bonne de Jersey, Oswego Beurré, Oswego Incomparable, Seckel, Stephen's Genesee, Swan's Orange, Beurré d'Aremburg, Passe Collmar.

"The following varieties have generally been severely, if not fatally injured, viz: Bartlett, Madeleine, Rostiezer, Summer Franc-Real, Brown Beurré, Beurré Bosc, Beurré Diel, Duchess d'Angouleme, Flemish Beauty, Henry IV., Marie Louise, Easter Beurré, Glout Morceau, Prince's St. German, Vicar of Winkfield, Angora, Winter Nelis, Ott.

"The following varieties of cherries are fatally injured, viz: Black Eagle, Black Tartarian, Burr's Seedling, Downton, Downer's Late, Elton, and Yellow Spanish.

"The following varieties have entirely escaped, viz: Belle de Choisy, Belle Magnifique, Carnation, Early Richmond, Montmorency, May Duke, English Morrello, Reine Hortense.

"The following varieties of plums have escaped, viz: Coe's Golden Drop, Magnum Bonum Yellow, Red Magnum Bonum, Orange, Washington, Yellow Gage, and Smith's Orleans.

"The following varieties are mostly killed, viz: Bleeker's Gage, Duane's Purple, Jefferson, Lawrence's Favorite, Reine Claude de Bavay, and Cherry.

"Among roses, the Hybrid Perpetuals have almost entirely escaped.

"The above has been made out, after carefully examining very many fruit-trees in various localities."

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G. C. Thorburn's New Plants.—We noticed the spring *Catalogue* for 1856, issued by Mr. G. C. Thorburn, of Newark, N. J., lately, and had the pleasure of unpacking a box of his varieties, the other day, which promise to add lustre of no common kind to our summer greenhouse and bedding-out plants.

Among them we notice, with particular favor:—

*Fuchsias.*—Empress Eugenie; wide, reflexed sepals, of a rosy crimson, with a violet shading; corolla, fine white; graceful habit, and beautiful foliage.

*Lady of the Lake;* fine, deep crimson tube and sepals, with *blush white* corolla.

Duke of Wellington; crimson sepals, and lilac stained corolla.

Duchess of Lancaster; white tube and sepals; lovely violet corolla; very large and fine.

Sir John Falstaff, Vesta, &c. &c.

*Geraniums.*—Enchantress; large, white; top petals clouded with purple; lower petals white; showy.

Beauty of Combe Park, Chepstead Beauty, Cerise Unique, Cottage Maid, King of Nepaul, White Unique, &c. &c.

*Heliotropes.*—Beauty of the Boudoir; the finest in cultivation; violet blue, with light eye, of the most exquisite perfume, fine foliage, and extra habit; now first sent out.

Gem, Grandiflora, &c. &c.

*Verbenas.*—Brilliant de Base, Lord Raglan, Eblouissante, Flirt, Hector, Honeysuckle, Admiration, Kurtz Defiance, &c.; together with several rare evergreens, including the Funebral Cypress, &c. &c.

The Thorburns, both of New York and Newark, have done, and are doing, much for horticulture and floriculture, and orders sent to either house, will be promptly and carefully executed.

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Mr. A. Fahnestock, the corresponding partner of the Syracuse Nurseries, has sold out his interest there, and removed to Toledo, Ohio, where he carries on the nursery business in all its varieties, and, we doubt not, with the approbation of his friends.

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Manly and Mason's Trade List for 1856, and spring of 1857, from the Buffalo nurseries and Oakland gardens, just issued, contains a large variety of ornamental trees, evergreens, fruit-trees, esculent roots, &c. &c., together with greenhouse and bedding-out plants.

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Useful Hints to Improvers.—Sir Uvedale Price has the following judicious remarks: "In all that relates to cottages, hamlets, and villages, to the grouping of them, and their mixture with trees and climbing plants, the best instructions may be gained from the works of the Dutch and Flemish masters, which afford a greater variety of useful hints to the generality of improvers, and such as might more easily be carried into practice, than those grander scenes which are exhibited in the higher schools of painting. All the splendid effects of architecture, and of assemblages of magnificent buildings, whether in cities, or amidst rural scenery, can only be displayed by princes, and men of princely revenues. But it is in the power of men of moderate fortunes, by means of slight additions and alterations, to produce a very essential change in the appearance of farm buildings, cottages, &c., and in the grouping of them in villages; and such effects, though less splendid than those of

regular architecture, are not less interesting. There is, indeed, no scene where such a variety of forms and embellishments may be introduced at so small an expense, and without anything fantastic or unnatural, as that of a village; none where the lover of painting, and the lover of humanity, may find so many sources of amusement and interest."

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DEAR SIR: I cannot forego a remarkable passage of Mr. Cretin's speech in the Commice of St. Symphorier. He says:—

"* * * Agriculture and business are twin sisters; they aid each other. When one is suffering, the other feels the effect of it. * * * Agriculture is the most moral of all arts; we are going to prove this. * * * We often hear people say: This industry, set up in that State, is going to interfere with a rival industry in another State or town; not so with agriculture. Never did good cultivation impede the progress, or diminish the benefits of another good cultivation. But, two firms in the same city or town transact the same kind of business; they are rivals, and conceal their operations. Two farmers produce the same crops; they give each other all information, and promote, at large, the best methods of cultivation; they *emulate*, and do not *rival*. What is the reason? The first have a certain, limited number of customers, who can leave them; the others, have all the world for customers, and God and nature for stock."

Industry works on a given *capital*; what one gets, he takes it (as more than his share) out of that capital. Agriculturists depend upon that inexhaustible source which comes from nature's bountiful treasure. It does not take away what ought to be the share of others; there is no *competition*, and, of course, no angry feelings. B.

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# Horticultural Societies.

NEW YORK HORTICULTURAL SOCIETY'S EXHIBITION.—The show of plants, flowers, and garden vegetables, in June, at Clinton Hall, was worthy of note in several points of view. In the first place, it was the show of a society numbering some three hundred paying members, at a season of the year when earth's plants were in full bloom, and when every gardener who cultivates vegetables for the city market should boast of his abundant productions. The Society published a liberal list of premiums. * * *

In fruit the show was better. There were perhaps a dozen quarts of strawberries, and some of them very handsome. Two dishes of Longworth's Prolific, exhibited by Edward Decker, gr. of J. Q. Jones, took a five dollar premium, and were considered much the finest specimen exhibited, though several others were handsome, both of this variety, Hovey's Seedlings, and some others. There were several fine seedlings.

Rare plants were indeed rare. Not a single one of the celebrated new Chinese plant, *Dielytra Spectabalis*, was shown, and only a meagre bunch of the flowers. There were four pots of Erica, in full bloom, one of them bearing flowers of pale green, shown by Alex. Gordon, gr. to Edwin Hoyt, that could not be easily exceeded in beauty.

The same gardener exhibited a plant, we think, quite unknown to florists generally in this country, called *Parritta Borbonica*. It is not in flower, but the leaves are very beautiful, and attracted much attention. It was awarded a premium of ten dollars.

The collection of cut roses was as fine as the most ardent lover of this, the Queen of Flora's Kingdom, could desire. The first premium, fifteen dollars, was awarded to Wm. A. Burges, of Glenwood, near Roslyn, L. I., for the best collection of roses, and a premium of ten dollars for a bunch in a pot. He has some seventy varieties, most of which he brought from England three years ago, of the choicest in the kingdom. This fifteen dollar premium was the one offered by W. G. Hunt.

Dr. G. Knight showed a pretty collection of ferns, a beautiful plant which is very much neglected, because it is so common in a wild state. His new arrangement of long, tin tubes, filled with water for cut flowers, is a great improvement on the old style, of vials set in holes in a board.

The great lack of interest in the public of New York, is the most remarkable thing connected with the show and the Society. True, there was a fair amount of visitors in the evening, but, through the day, the rooms were nearly empty, and no wonder; the exhibition was not one to attract a crowd, or one worthy their attention, or creditable to the city, however much it might be to the active few who have so long struggled to maintain it in a state of respectability.—*New York Paper.*

PENNSYLVANIA HORTICULTURAL SOCIETY.—The stated meeting of this Society was held at Concert Hall, Philadelphia, on Tuesday evening, June 27, 1856, E. W. Keyser, Vice-President, in the chair. Premiums were awarded by the Committee on Plants and Flowers, viz:—

Fuchsias—eight plants—for the best to Thos. Robertson, gr. to B. A. Fahnestock; for the second best to John Pollock, gr. to James Dundas. Gloxinias—eight plants—for the best to Thos. Robertson; for the second best to John Pollock. Herbaceous cut flowers—for the best to Peter Raabe. Collection of twelve plants—for the best to Robert Buist; for the second best to Chas Sutherland, gr. to John Anspach. Collection of six plants—for the best to Mark Hill, gr. to M. W. Baldwin. Specimen plant—for the best to Thomas Robertson, for *Stephanotis floribunda*; for the second best to John Pollock, for *Medinilla magnifica*. For *New Plants*—four dollars to John

Pollock; one dollar to Thomas Robertson. *Table Design*—for the best to Chas. Sutherland. *Basket*—for the best to J. J. Habermehl, gr. to John Lambert; for the second best to Mark Hill. *Bouquets*—pair—for the best to H. A. Dreer; for the second best to J. J. Habermehl.

*Special Premiums.*—Four dollars, for a collection of Orchids, to John Pollock; two dollars, for a collection of cut Roses, to Henry A. Dreer. The Committee noticed a fine collection of Verbenas and Phlox Drummondii, new varieties, and a handsome collection of Petunias, by Mark Hill.

By the Committee on Fruits. Strawberries—for the best—A. L. Felten, for the Moyamensing; for the second best to the same, for Hovey's Seedlings. Cherries—for the best to G. W. Earl; for the second best to Isaac B. Baxter. Grapes—three bunches—for the best Black to Chas. Sutherland; for the second best to Wm. Grassie, gr. to John Tucker. Currants—for the best Red and White, to Isaac B. Baxter. *Special Premiums*—for a fine display of Strawberries, embracing thirteen varieties, three dollars to A. L. Felten; and, for the finest specimen of Pineapple ever exhibited, and weighing nine pounds, five dollars to Wm. Grassie.

By the Committee on Vegetables. *Display*—for the best, by a market gardener, to A. L. Felten.

The Committee on Plants and Flowers, to whom was referred the samples of labels of the names of fruits and plants, to be attached to trees and plants presented to the Society by André Leroy, of France, reported that they had examined them, had tested them by immersion in water, to which they were impervious, and recommend them as worthy of general use, being at once ornamental, durable, and moderate in price.

Five gentlemen were elected to membership.

OBJECTS EXHIBITED; PLANTS.—From James Dundas's collection. *Orchids*—Oncidium flexuosum, O. ampliatum, Cattleia Mossiæ, C. M. major, Calanthe veratrifolia, Acanthophippium bicolor, Saccolabium micranthum. *New Plants*—Isolonia Decasneana, Hydrangea variegata, Camphylobotrys discolor, Allopectus Schlemmii, Begonia xanthina marmonii, Phrynium micans, Fuchsia Empress Eugenia, F. Water Nymph. *Eight Fuchsias*—Veltigeur, Ajax, Clapton Hero, Magnificent, Alpha, Glory, Sidonia, Prince Albert. *Eight Gloxinias*—Queen, Fyffana grandiflora, Cartonii superba, Scottii, Caulescens, Rubra, Rubra violacea, and Arago. *Collection of twelve*—Pleuroma elegans, Nierenbergia gracilis, Begonia semperflorens, Pelargonium Hendersonii, P. Madam Laffery, P. Medaill d'Or, P. Elise Meillez, Allamanda nereifolia, Petratheca verticillata, Agapanthus umbellatus, Cuphea platycentra, Bilbergia amelioides, and Specimen Medinilla magnifica.

From B. A. Fahnestock's. *New Plants*—Fuchsia Empress Eugenie, Achimenes gaintice, A. Sir P. Frentham. *Eight Fuchsias*—Madam Sontag, Glory, Magnificus, Mrs. Lloyd, Pearl of England, Psyche, Alpha, Diadem of Flora. *Gloxinias*—Imperialis, Princess Lambaile, Godfrey, Wilsonii, Alba sanguinea, Huntleyana, Comptess Bocarmi, and Fyffana. *Twelve Plants*—Allamanda nereifolia, Medinilla urophylla, Mahernia Diana, Pelargonium Tom Thumb, Cryptolepis longiflora, Erica ventricosa superba, E. V. coccinea, Fuchsia Prince Arthur, Amaryllis Johnsonia, Oncidium lanceanum, Pitcarnia purpurea, Adamia versicolor. *Specimen*—Stephanotis floribunda.

By Robert Buist. *Twelve Plants*—Pelargonium Flower of the Day, P. Kingsbury Pet, Fuchsia Clio, F. veltigeur, Seedling Calceolaria, Oncidium pulvinatum, Siphocampylus magnificus, Mahernia incisa, Gardoquia Hookerii, Tecoma jasminoides rosea, Torenia asiatica, and Diplodenia urophylla. *New Plants*—Veronica variegata, and Verbena Mrs. Woodroffe.

From John Anspach's. Hydrangea hortensis, Clerodendrum fallax, Fuchsia speciosa, F. Honey Cell, F. Psyche, Cereus cylindricus, Nerembergia grandiflora, Begonia Drezii, B. nitida, Cuphesca platycentra, Tremandra verticillata, and Vinca occulata.

From M. W. Baldwin's. *New Petunias*—Kennedy's Lone Star, Attraction, Queen of the West, Rose Bank Beauty. *Six Plants*—Fuchsia magnifica, Pelargonium Witch, Fuchsia expansion, Ixora coccinea, Aphelandra cristata, and Geranium Senora.

By John Gray. Twelve Seedling Verbenas, and three new Phlox Drummondii.

By Thomas Meehan. Cut flowers of Clerodendrum Bungei, and Hovey's new Petunias—Excelsior, Glory of America, and Inimitable.

From Samuel Welsh's. A Seedling Gloxinia.

From John Anspach's. Grapes—two varieties.

By A. L. Felten. Thirteen varieties of Strawberries, Gooseberries, and Currants.

# Calendar of Operations.

## AUGUST.

### BY WILLIAM SAUNDERS.

VEGETABLE GARDEN.—Sowings of early beet, turnips, kidney beans, and peas, may yet be put in. They will afford a desirable dish when tender vegetables of that kind are scarce. Spinach, to stand the winter, should now be sown; prepare a well drained border, and manure and dig deeply. The savoy spinach is the hardiest. At the same time, throw in a few seeds of lettuce, to be lifted by and by, and transplanted into frames for using about Christmas. Cauliflower for frames should now be sown, as also Early York and flat Dutch cabbage, to stand over winter.

Plantations of canteloupes, melons, Lima beans, &c., that are growing slowly, should receive an extra deep forking-up of the ground between the rows. This will give them a stimulus to growth which will enable them to carry out a crop. This loosening allows a free access of air to the roots and the soil by which they are surrounded. The air furnishes the roots with an increased supply of substances essential to their growth, such as carbonic acid and ammonia, either generated by the air favoring the decay of organic matters naturally in the soil, or absorbed direct from the atmosphere. The mineral ingredients of the soil are also liberated, and brought into a fitting state for the use of plants. The subsequent effects of

such cultivation is apparent in the increased vigor and deeper colored verdure of the plants. Stir the ground about celery plants, and do not begin to earth it up until the plants are growing freely.

HARDY FRUIT.—*Grapes.*—The points of all the leading shoots should now be pinched out, and thin out some of the lateral or side shoots on the fruit bearing branches, so that a free circulation of air may reach the fruit, but not by any means endeavor to expose it fully to the sun. It will ripen more perfectly, and attain a deeper color under the shade of the leaves. It is not too late yet to cut out some of the bunches, if the crop is too heavy; the grape is a free and large bearer, but a continued yearly supply can only be insured by allowing regular and moderate crops.

STRAWBERRIES.—Plants for forcing early next spring should be secured, and potted early this month. Select young runners of the present year's growth, and place them singly into five-inch pots. Use a good, loamy soil; let it be rather dry when used, and press it firmly in the pots. If advantage can be taken of a shaded spot, they should be placed there for a week or so, until they commence growth; then they cannot have too much sun, but see that they are always well supplied with water. By slightly diminishing the foliage, they may be set out in the sun at once.

ROOT PRUNING.—Pruning the roots of trees is an operation conducive to fruitfulness not practised to that extent which it merits. In the hands of intelligent cultivators it is a valuable expedient, much more certain in its effects than many of the so-called dwarfing systems by grafting. Indeed, many of the stocks used for this purpose grow so vigorously in this climate, as to defeat the object in view. The mahalab is used as a stock for dwarfing cherries, in Europe; here, they grow as strong upon it as on the mazzard. Even the quince will not check the vigorous growth of some pears, and are, in consequence, many years in arriving at a bearing state. Pear culture on the quince, although beautiful in theory, does not seem to give entire satisfaction in general practice. Many are inclined to believe that they are short-lived when thus grafted. To such it may be useful to know, that all the advantages claimed for dwarf stocks can be derived from skilful root pruning.

Many expedients in the culture of trees that we are apt to consider only of recent application, have long been practised. Such operations to induce fruitfulness, as bending down the shoots, cutting the bark, or ringing the branches, root pruning, &c., were practised during the last century. Darwin, seventy years ago, alludes to these practices in the following comprehensive sentences:—

> "If prouder branches, with exuberance rude,
> Point their green germs, their barren shoots protrude,
> Wound them, ye sylphs, with little knives, or bind
> A wiry ringlet round the swelling rind;
> Bisect, with chisel fine, the roots below,
> Or bend to earth the inhospitable bough."

The advantage of root pruning is, that you can plant a young tree in a favorable position for luxuriant growth, and, after it has attained a size to bear a crop, throw it into fruit at once. This is effected by checking the growth in time to admit of the formation of wood buds. By digging a trench round the tree a few feet from the stem, at the present time, and cutting through the strongest roots, wood growth is checked, and fruit buds are formed before the trees become deciduous. Spring has been recommended for the operation, but the period of growth is the proper time to produce immediate effect. This treatment may be performed on all fruit-trees that have attained a size for bearing a crop.

GRAPERY.—When the fruit is ripening, the supply of water at the root should be gradually curtailed. Syringing over the foliage should also be discontinued, but still, keep a slight humidity in the atmosphere by sprinkling water on the floor of the house. Keep the house well aired, both night and day, and pinch the young points out of all growing shoots. When a bunch of fruit is cut, immediately prune back the shoot to within two or three eyes of the stem, and use means to get the wood well matured. The ripening and hardening of the wood is now the principal object, as upon it depends the next season's production. The soil and atmosphere should be kept perfectly dry as soon as the crop is fit for use. Many graperies are destroyed by being overtaken with frost while in a succulent and immature state.

Outside borders should be covered with leaves or manure, to throw off heavy fall rains. Everything, for the future, depends upon a thorough and proper termination of growth.

GREENHOUSE.—The gayety of the house will still be kept up with fuchsias, gesneras, gloxinias, and those beautiful and indispensable summer flowers, the achemenes. Endeavor

to keep the atmosphere humid, by a liberal application of water over the floor, staging, &c. Water such plants as require it, individually, early in the morning; shade as the day advances, and use the syringe freely over the foliage. By attention to these details, and closing the house partly, at least, keeping front sashes closed, preventing the dry, external air from reaching the plants, a comparatively cool atmosphere can be maintained. During the night, all the air possible may be given, that the plants may participate of the lowering of temperature universally consequent upon the absence of light.

Attention must now be directed to the stock of winter flowering plants, such as bouvardias, linensis, heliotropes, cinerarias, Chinese primrose, scarlet pelargoniums, coronillas, cytisus, &c. Shift such as require it into larger pots, and pinch the points of the shoots, in order to increase the number of flowering branches.

Potting.—In removing young growing plants into larger sized pots, the roots should not be disturbed; indeed, they should be removed before the roots become so numerous as to spread round the sides of the pots. Any check now will throw them prematurely into flower, and thus partly defeat the object in view. For the same reason, watering must be regularly performed. The application of water is the most powerful controlling influence we possess in the artificial culture of plants. By limiting the supply, we can induce a state of rest, hasten the development of the flowering principle, and induce maturity of the wood, that will enable them the better to withstand the vicissitudes of winter.

Mignonette for early winter flowering may now be sown; prepare well-drained five-inch pots, by filling them with good, turfy soil, rather dry, and firmly pressed; sow the seeds on the surface, and, instead of covering, simply press them in. Set the pots in the shade, and keep moist; but be careful in watering after the plants appear, otherwise they will speedily *dis*appear.

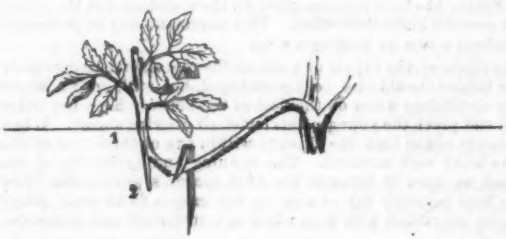
Pelargoniums that have been cut down, will now be making fresh growths; as soon as these are about a couple of inches in length, the plants should be taken out of the pot, all the soil shaken from the roots, so that they may be pruned, then place them in as small pots as the roots will admit of, and again set them in a sheltered spot to grow.

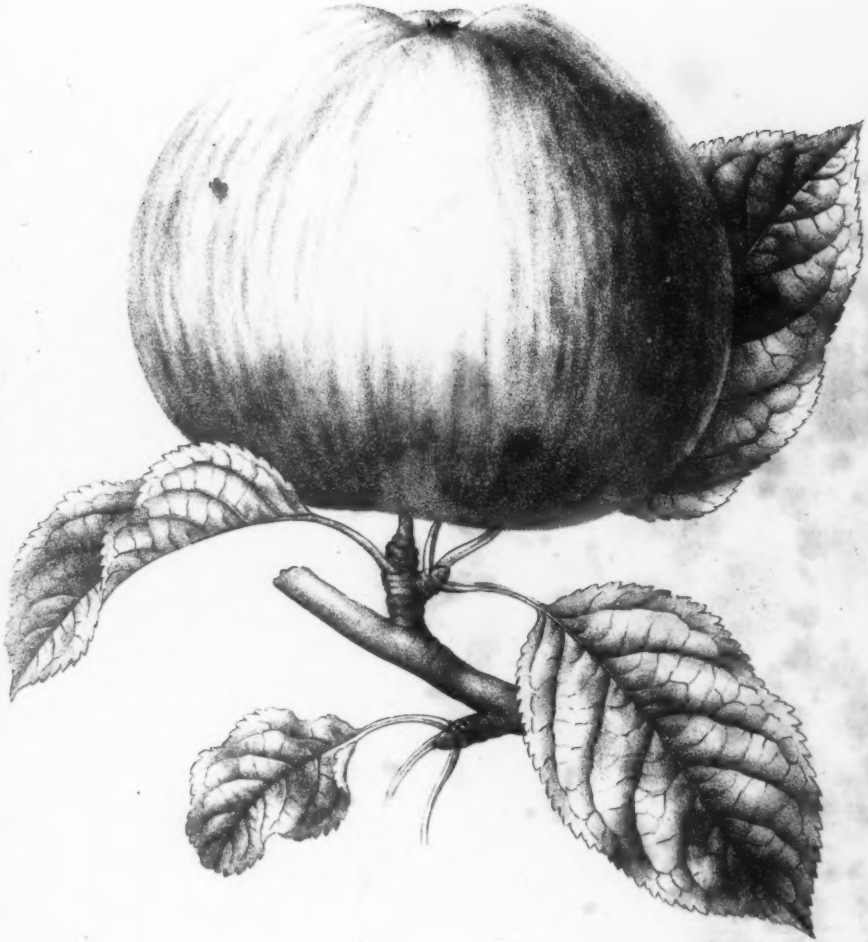
Cyclamen.—Water sparingly as they start into growth, and increase the supply as they approach the flowering state.

A few of the earliest camellias and azaleas may be brought into the house this month. All greenhouse plants that are out of doors, should be gradually brought into a condition of rest. Protect them from heavy rains by throwing them on their sides, if no better means of protection is at hand.

Flower Garden and Pleasure Grounds.—The operations in these departments, at present, are principally of a routine character. In geometrical gardens, the outlines of the beds ought to be kept distinct, and trim the plants when they grow out over the edging. In tying climbing and trailing plants, do not aim at over-neatness; close tying tends to destroy that gracefulness of disposition which such plants naturally assume when left to themselves. In general, the main stems only will require fastening, allowing the side shoots to take a natural position.

Many shrubs and plants that are difficult to raise by cuttings, may be increased by layers. A layer may be defined as a cutting only partially separated from the plant. The branch is bent down to the ground, and, at the bend, a cut is made half through the shoot, cutting upwards for about half an inch. Some plants do as well if the shoot is twisted at the bend; anything to check the flow of sap will cause a root formation. The figure shows the appearance of a layer. The line at 1 represents the surface. At 2, the cut part is shown, and strong branches will require to be kept in place by a stout peg, as here represented. Nearly all plants, even fir-trees, may be increased by this practice.





THE KING APPLE.

PINUS SABINIANA